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CAMERA CRAFT

A Photographic Monthly

Edited by
H. D'ARCY POWER, M, D.
EDGAR FELLOES
P. DOUGLAS ANDERSON

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Index to Volume XXX

COVER DESIGNS BY W. R. POTTER

"A California Cottage" (Illustration) ..... *By Anson Herrick* 211
Advertising and the Commercial Photographer ..... *For the Professional* 143
Advertising Illustrations ..... *By L. G. Rose* 414
Advertising Photograph Show? How Much Should the ..... *By Wilbur Perry* 131
Album, Making Your Own ..... *By O. K. Wiandt* 481
A Portrait of Artist (Illustration) ..... *By F. Y. Ogasawara* 475
Areo Photography ..... *By George E. Russell* 507
Artificial Light ..... *The Amateur and His Troubles* 593
Associate Editor, Our New ..... *Editorial* 234
Associations as Business Builders ..... *Editorial* 540
A Still Life Study (Colored Frontispiece) ..... *By Maurice Deeks* 303
Autochrome Work, Some Causes of Failure in ..... *A Photographic Digest* 498
Background Effects, Design in ..... *Fred Telfer* 121
Backgrounds, Different Types of ..... *The Amateur and His Troubles* 391
Backgrounds for Small Objects Photographed in the Studio ..... *By J. G. Pratt* 3
Beginner, For the ..... *The Amateur and His Troubles* 95, 144, 244
Between Showers (Frontispiece) ..... *By G. Allen Young* 202
Bottles, Opening Glass-Stoppered ..... *By R. L. McColm* 460
Bromide-Chloride Wet-Collodion ..... *A Photographic Digest* 496
Bromide Paper Modifications ..... *The Amateur and His Troubles* 41
Bromoil Prints, Roller Inking ..... *A Photographic Digest* 395
Bromoil and Bromoil Transfer ..... *By Chris J. Symes* 72, 123
Brownie Camera, The Box ..... *The Amateur and His Troubles* 492
California Cup, The (Illustration) ..... *Won by Kaufmann & Fabry Co.* 583
California Street Towers (Frontispiece) ..... *By P. Douglas Anderson* 102
California Street (Illustration) ..... *By Gabriel Moulin* 73
Camera for the Purpose and the Explanation, A ..... *By Edgar Felloes* 18
Camera Shall I Choose? Which ..... *The Amateur and His Troubles* 445
Carbro Printing, Experiments on Control in ..... *A Photographic Digest* 235
Carbro Work, Some Notes on ..... *By A. H. Hall* 42
Car Photography (Illustrated by W. E. Dobbs) ..... *By Edgar Felloes* 53
Case for Your Photographs, A ..... *By Frank Stratton* 485
"Castles of Today" (Illustration) ..... *By Johan Hagemeyer* 529
Cats? Do You Like (Illustrated by Jas. B. Herrick) ..... *By Edgar Felloes* 327
Ceramic Miniatures ..... *By Herbert Denison* 397
"Christ in the Temple" (Illustration) ..... *By J. W. Beattie* 275
Christmas Greetings ..... *By Miles J. Breuer, M.A.,M.D.* 228
"Chubby" (Frontispiece) ..... *By De Gaston* 152
Cliffs of Moses Coulee, The (Illustration) ..... *By W. H. Nitschke* 361, 365
Clouds in Your Landscape, Put ..... *By J. G. Pratt* 557
Clouds My Hobby ..... *By Leo. Tiede* 156
Club News and Notes 39, 145, 247, 297, 396, 452, 501, 553
Color Photography, The Raylo Process of ..... *By Joseph W. Gannon* 305
Color Photographs ..... *A Photographic Digest* 38
Commercial Photographers' Association of San Francisco 45, 148
Commercial Photographers' Association of Los Angeles 127

Commercial Photography ... *By Edgar Felloes* 69
Commercial Work, What to Charge for ... *For the Professional* 45
"Construction" (Illustration) ... *By Chas. Lederle* 217
Contrast, Another Method for Portraits of Extra ... *A Photographic Digest* 288
Contrast, Subjects of ... *A Photographic Digest* 287
Control ... *Editorial* 233
Convention Dates ... *For the Professional* 46
Convention at Washington, D. C., Sidelights of the 1923 ... *By P. Douglas Anderson* 424
Copying, Exposures in ... *A Photographic Digest* 345
Copying Stunt, A ... *By R. L. McColm* 495
"Corner of Greek Theatre" (Illustration) ... *By G. H. S. Harding* 531
Cutting Odd Sized Plates ... *By R. L. McColm* 504
Cyko ... *By Sigismund Blumann* 410
Dark Room, Cleanliness in the ... *The Amateur and His Troubles* 295
Deer-Horns, Locked ... *By A. F. Turner* 165
Deer in Mid-Winter ... *By W. Wynne Bolton, B. A.* 120
Desensitisers, New ... *A Photographic Digest* 189
Desensitizing in Its Commercial Aspects ... *By A. C. Banfield, F.R.P.S.* 379
Developing ... *The Amateur and His Troubles* 549
Developer, Hydrocoerulignon ... *A Photographic Digest* 448
Developing, About ... *The Amateur and His Troubles* 347
Developers ... *The Amateur and His Troubles* 348
Developing Tanks ... *The Amateur and His Troubles* 348
Developing Solutions, The ... *A Photographic Digest* 287
Development of Interior Subjects ... *A Photographic Digest* 289
Developer for Line Work Giving Extreme Contrast ... *By G. Archer Lindsay* 195
Developing Studio Portraits ... *A Photographic Digest* 288
Developing in Relation to Contrast in the Subject ... *A Photographic Digest* 286
Distance Difference—A Curious Focal Rule, A ... *A Photographic Digest* 596
Drawing in Pen and Ink from Photographs ... *By William S. Rice* 371
Dressing, Camera ... *By R. L. McColm* 578
Drying ... *The Amateur and His Troubles* 549
Eastman School ... 546
East, West Hames Best (Illustration) ... *By A. E. Davies* 63
Eclipse, The ... *By Geo. L. Eddy* 538
Eclipse, The ... *By W. Robert Whyte* 574
Enlarger, A Home-Made "Hispeed" ... *By D. Peterson* 432
Enlarging Papers, The Eastman Line ... *By Sigismund Blumann* 519
Enlarging Papers, The Gevaert Line ... *By Sigismund Blumann* 272
Exhibition of Pictorial Photography, The International of New Westminster, B. C. 552
Exhibition, The Emporium (Third Annual) Photographic ... *By Leandro N. Lewis, Jr.* 527
Exhibition, The Third Annual Japanese-American News Photographic ... *By H. Shishimoto* 476
Exposure ... *The Amateur and His Troubles* 295
Exposure Meter, The Value of an ... *By Clayton L. Drew* 218
Exposure, The Mechanical Side of ... *By G. M. Milner* 32
Exposures, Thirty-Six Good ... *By Harry F. Blanchard* 23
Film and the Open Tank, About Cut ... *The Amateur and His Troubles* 348
Films Blurred or Out of Focus ... *The Amateur and His Troubles* 296
Films, Reproducing Stained ... *A Photographic Digest* 448
Filters, About Sky ... *The Amateur and His Troubles* 244
Fireproofing Fabric ... *A Photographic Digest* 286
Fixing ... *The Amateur and His Troubles* 549
Fixing, About ... *The Amateur and His Troubles* 349
Flash-light Photography in Natural History ... *A Photographic Digest* 37
Foreground Trees ... *Art and the Crafts* 92
Forgeries and Their Perpetrators, Using the Camera to Prove, Traced ... *By Chauncey M'Govern* 169

Forgery and Forgers by Fotografy, Finding....*By Chauncey M'Govern* 57, 462, 535, 579
Forthcoming Exhibitions, 1923....238, 298, 336, 385, 396, 423, 513, 568
Frontispiece, Our Colored....*Editorial* 337
Glass Negatives, Removing Emulsion from....*By R. L. McColm* 434
Glueing Leather on Cameras....*By R. L. McColm* 448
Goerz, The Passing of Carl Paul....*Editorial* 135
Graf Variable Lens, The....*By C. A. Love* 64
Greetings....*Editorial* 584
Greeting Cards....*By P. Douglas Anderson, Ralph Young, Edna R. Gordon and J. Lee Stocking* 514
Greeting Cards, Christmas (Illustrated by Mrs. Holly Todd)....*By P. Douglas Anderson* 566
Griffiths, F.C.S., An Interview with Jenkyn....*For the Professional* 242
"Groschnen" (Illustration)....*By C. Puyo* 13
Halation in Diffused Projections, Elimination of....*By A. J. Rich, Jr.* 369
Half Dome, Yosemite Valley (Illustration)....*By Evelyn Blackman* 493
Hands, Protecting the....*The Amateur and His Troubles* 549
Harding, The Funeral Cortege of President Warren Gamaliel (Illustration)....*By Morton & Co.* 435
Hard to Find....*By E. N. Musgrave* 561
Hello, Daddy (Poem)....*By Florence Presley* 470
Hirsch, The Passing of Alphonse....*Editorial* 486
Home Portraits....*By Frank Reeves* 276
Ink, The....*A Photographic Digest* 395
In Old Santa Barbara (Frontispiece)....*By Samuel Adelstein* 506
Insects as Seen through the Magnifying Eye of the Camera, Tiny....*By J. G. Pratt* 478
Insulting Your Intelligence....*By William P. Mattern* 84
International Photographers' Association 47, 97, 147, 198, 248, 298, 352, 401, 449, 503, 595
International, The 1924....*Editorial* 436
"In the Studio Door" (Illustration)....*By G. W. Harting* 525
"I've Got Him Hooked!" (Frontispiece)....*By Frank B. Howe* 2
Keith, William (Frontispiece)....*By W. E. Dassonville* 556
Kodak Enthusiast Finds Fame and Fortune....*By O. H. Barnhill* 66
Labels, Non-Staining Bottle....*By R. L. McColm* 383
Labels, Emergency....*By R. L. McColm* 378
Landscape Subjects....*The Amateur and His Troubles* 494
Latent Image, Action on....*A Photographic Digest* 192
Legerdemain of the Advertising Camera, The....*By A Commercial Art Manager* 281
Lens, F 4.5 Service from an F 7.5....*By Wm. D. Rawling* 382
Lenses, Photographic....*By W. B. Harsel* 324
Lens Hoods....*The Amateur and His Troubles* 296
Lens Itself, Now for the....*The Amateur and His Troubles* 446
Lens Speed, The....*Editorial* 185
"Les Denicheurs" (Illustration)....*By Leonard Misonne* 15
Light and Its Master, The....*A Photographic Digest* 394
Light, Distance from....*The Amateur and His Troubles* 549
Light, Human Interest and....*By C. B. Larrabee* 27
Lighting....*The Amateur and His Troubles* 391
Lighting and Background, Choice of....*The Amateur and His Troubles* 390
Lightings, Five Portrait....*By O. J. Smith* 405
"Light, The Spot"....*By W. Findlay* 231
Lily, Large Rain: Our Wild Flowers....*By Dan E. McCaskill* 34
Lily, The Leopard....*By Albert M. Shaw* 585
Little Theatre of the Hills, The....*By Chas. P. Nelson* 103
M'Govern, Chauncey (Illustration)....431
"Market in Nurnberg" (Illustration)....*By Max Schiel* 523
Memories or Pictures—Which?....*By H. E. Morehouse* 112
Mild Light (Illustration)....*By H. Ito* 477
Miss Jean Traig (Frontispiece)....*By O. J. Smith* 404
Missions at Santa Barbara and Santa Ynez....*By Samuel Adelstein* 253

Multiple Printing, A Method of Registration for ..... *By William H. Zerbe* 214
My Memory Kit (Poem) ..... *By William Ludlum* 77
Negatives from Bromide Enlargements ..... *The Amateur and His Troubles* 244
Negatives, Harmonizing Harsh ..... *The Amateur and His Troubles* 244
Negatives, Reproduced ..... *A Photographic Digest* 238
Negatives, Types of ..... *The Amateur and His Troubles* 348
Newspaper Photography ..... *By L. G. Rose* 311, 362
Neymann, Percy, Ph. D. ..... *Editorial* 83
"Night's Awakening" (Illustration) ..... *By John M. Whitehead* 11
Night View, A ..... *By Joseph O. Hickox* 378
Notes and Coments 49, 99, 149, 199, 249, 299, 349, 402, 450, 502, 553, 598
"Now and Forever" ..... *By Percy F. Murray* 231
Oakland High School Meet (Illustration) ..... *By G. Allen Young* 177
"Of Days Long Past" (Illustration) ..... *By Dr. Chas. H. Jaeger* 213
Off the Beaten Path ..... *Editorial* 337
Oh, See What Santa Brought Me! (Illustration) ..... *By O. C. Hanson* 594
Oil-Print Process, The ..... *By A. Niklitschek* 203, 261
"Old Man" (Illustration) ..... *By A. S. Weinberg* 215
On Being Different ..... *Editorial* 285
Orthochromatic Photography ..... *By H. J. Devine* 471, 524
Our Book Shelves 40, 98, 196, 245, 300, 399, 555
Our Frontispiece 122
Our Frontispiece ..... *By Edgar Felloes* 534
Our Wild Flowers 34, 586
Photographers' Association of America 46, 142, 294, 330, 343, 487, 490, 541, 591
Photographers' Association of California 86, 136, 186, 239, 290, 338, 387, 438, 491, 542, 586
Photographers' Association of Pacific Northwest 188, 489
Photography and Fretwork ..... *By Edgar Felloes* 117
Pictorialism? What Is ..... *Art and the Crafts* 500
Pictorial Problem, A ..... *By Edgar Felloes* 181
Pictorial Study ..... *By Edgar Felloes* 334
Picture Taking in Europe ..... *By Harrison C. Ryker* 317
Pictures for the Children ..... *By Lee S. Seward, M. D.* 80
Pictures with Bronze or Silk ..... *Editorial* 386
Pinakryptol ..... *A Photographic Digest* 190
Pinakryptol Green ..... *A Photographic Digest* 191
Portrait of Miss A. (Colored Frontispiece) ..... *By H. C. J. Deeks* 302
Portraits and Backgrounds, Outdoor ..... *The Amateur and His Troubles* 390
Portrait in the Open ..... *The Amateur and His Troubles* 494
Portraiture ..... *The Amateur and His Troubles* 446
Portraiture, Flashlight ..... *The Amateur and His Troubles* 593
Positives by Reversal ..... *A Photographic Digest* 596
"Princess Jue Quon Tai" (Illustration) ..... *By Holmes I. Mettee* 219
Printer, The Ideal Photographic ..... *By J. G. Pratt* 355, 421
Printing ..... *The Amateur and His Troubles* 548
Printing Papers ..... *The Amateur and His Troubles* 548
Prints, Glossy ..... *The Amateur and His Troubles* 550
Prize Picture, Commercial Section, P. A. of A. (Illustration) ..... *By Kaufmann & Fabry Co.* 582
Process ..... *Editorial* 35
Professional Photographers' Association of Great Britain and Ireland, Ltd. ..... *For the Professional* 46
Projection, Something Big in 376
Record Keeping with the Hand Camera ..... *By Dr. H. D'Arcy Power* 426
Reflex, The Small ..... *A Photographic Digest* 447
"Romance of Industry" (Illustration) ..... *By O. C. Reiter* 528
Salon of Photography, The Tenth Annual Pittsburgh 210
Salon of the Camera Pictorialists of Los Angeles, The Sixth International ..... *By James N. Doolittle* 7

Salon 1923, The San Francisco-Oakland ... *By Henry A. Hussey* 455
Salon, The Seventh International (Los Angeles) ... *By James N. Doolittle* 563
Salons, The London and the Royal ... *By H. D'Arcy Power* 550
San Francisco's Water Front (Illustration) ... *By P. E. Brooks* 22
Santa Barbara Missions (Frontispiece) ... *By Samuel Adelstein* 252
Scale, A Very Delicate ... *By C. R. Lowe* 575
"Schnweschauffler" (Illustration) ... *By Adolf Fritz* 9
Sensitizing, Orthochromatic ... *A Photographic Digest* 38
Seventeen Miles as the Car Flies (Illustration) ... *By Kaye Shimojima* 473
"Shipman Process" Enlargements, The ... *By Joseph Shipman* 266
Silhouettes—a Suggestion ... *Editorial* 135
"Siresa" (Illustration) ... *By A. Victory* 17
Sleeping-Bag, With Camera and ... *By William H. Walker* 153
Snap the Home Folks ... *By R. L. McColm* 573
Snow Scenes ... *By Dr. H. W. Barr* 167
Souvenir of Golden Gate Park, A ... *By H. W. Arth* 155
Stacks and Funnels (Illustration) ... *By John Paul Edwards* 459
Stand for Reproduction Work, Vertical ... *By Max Henry Ferrars* 384
Stereo-Photo-topography ... *A Photographic Digest* 346
Stick to Your Job (Poem) ... *By Minnie Richard Smith* 130
Story-Telling Picture, The ... *By Edgar Felloes* 108
Stripping Negatives ... *A Photographic Digest* 289
"Table Top" Pictures ... *By Edgar Felloes* 228
Taking the "Photographic Story" of a Famous Hotel ... *By Ralph Young* 569
Tanks, Film Pack and Plate ... *The Amateur and His Troubles* 348
"The Clouded Moon" (Illustration) ... *By J. N. Whitehead* 521
"The Eye of the Camera is the Mirror of Life" ... *For the Professional* 46
The Lantern (Illustration) ... *By Louis A. Goetz* 461
The Martial Spirit (Illustration) ... *By W. H. Moser* 323
The Pathfinders (Illustration) ... *By Evelyn Blackman* 495
"The Smoke of Disaster Rolled Away Behold Our City of To-Day" (Frontispiece) ... *By William David Rawling* 354
The Stork (Illustration) ... *By Ralph Young* 457
The Three Brothers—Yosemite (Illustration) ... *By H. S. Lawton* 163
"The World and All—Before Him" (Frontispiece) ... *By De Gaston* 52
Third Dimension, The ... *By R. L. McColm* 360
Time of Day to Make Portraits ... *The Amateur and His Troubles* 392
Toning, Modified Copper ... *A Photographic Digest* 447
Toning, Variety of Tone in Sulphide ... *A Photographic Digest* 293
Transparency, The Making of a "Tri" or Three Color ... *By Frederic G. Tutton* 10
Travers, Reginald As Shylock (Frontispiece) ... *By Kathleen Dougan* 454
Tray Cleaning ... *By Carl W. Beese* 265
Tree in Mid-Distance, The ... *Art and the Crafts* 193
Tumolo Creek near Bend, Oregon (Illustration) ... *By H. W. Barr* 6
Upper Yosemite Falls (Illustration) ... *By H. S. Lawton* 125
Vancouver and New Westminster Photographers' Association, The ... 242, 243
Verito, The ... *By Sigismund Blumann* 178
Washing ... *The Amateur and His Troubles* 549
Watermarks in Paper, The Photography of ... *A Photographic Digest* 36
Watkins System ... *The Amateur and His Troubles* 347
Wild Flowers, Photographing ... *By Antone S. Soares* 221
Wild Life Photography ... *By Stanley Clisby Arthur* 158
Winner Photography, A Talk on ... *By A. H. Goud* 114
X-Ray Work ... *A Photographic Digest* 39
Yearly Index ... 599

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CONTENTS FOR JANUARY 1923

"I've Got Him Hooked!" (Frontispiece) ..... By Frank B. Howe
Backgrounds for Small Objects Photographed in the Studio ..... By J. G. Pratt 3
The Sixth International Salon of the Camera Pictorialists of Los Angeles ..... By James N. Doolittle 7
The Making of a "Tri" or Three-Color Transparency ..... By Frederic G. Tutton 10
A Camera for the Purpose and the Explanation ..... By Edgar Felloes 18
A View of San Francisco's Water Front ..... By P. E. Brooks 22
Thirty-six Good Exposures ..... By Harry F. Blanchard 23
Human Interest and Light ..... By C. B. Larrabee 27
The Mechanical Side of Exposure ..... By G. M. Milner 32
Our Wild Flowers (XX.—Large Rain Lily) ..... By Dan E. McCaskill 34
Editorial—Process 35
A Photographic Digest 36
The Photography of Watermarks in Paper—Flashlight Photography in Natural History—Working Details.
Club News and Notes 39
Our Book Shelves 40
The Amateur and His Troubles 41
Bromide Paper Modifications—Some Notes on Carbro Work.
For the Professional 45
What to Charge for Commercial Work—Commercial Photographers' Association—New Postal Bill Introduced.
International Photographic Association 47
Notes and Comment 49

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief

EDGAR FELLOES, Associate Editor

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VOL. XXX JANUARY 1923 No. 1

Backgrounds for Small Objects Photographed in the Studio

By J. G. Pratt, Washington, D. C.

With Illustrations by the Author

The question of backgrounds enters very largely into the photography of small objects, such as fruit or silverware, or the thousand and one things which the commercial man or the advanced amateur is called upon to photograph, and the rendering of this important item often spells "acceptance" or "rejection" for the finished print.

White Backgrounds

White grounds are the easiest and therefore the most generally used. They are best obtained by using the camera vertically, and employing a "light-box," as illustrated in Fig. 1. This is merely an ordinary box with the top and front removed, lined inside with white blotter, and covered with a piece of ground glass for holding the object to be photographed. It is preferable for the reflector to be slanted in order to catch the light to the best advantage. Sometimes excellent results are obtained by placing the object on a white cardboard, as a shadow is cast which throws the object into relief. Such pictures, however, are more artistic than scientific.

Black Backgrounds

Black grounds are often desirable for such objects as a pearl necklace, white flowers, and so on, and the easiest method is to place the object on a piece of black velvet. Never, however, employ black paper or cardboard for this purpose, as it is bound to throw a high light, and also gives an unpleasant mottled appearance on account of the tiny corrugations in the surface of the paper.

The best results, however, are obtained with what is known as the "dark box." This, as shown in illustration No. 2, is merely a deep box, lined inside with black paint or paper, with the top covered except for an aperture just large enough to accommodate the size of the background desired. The object is placed on a piece of clear glass over this black hole,

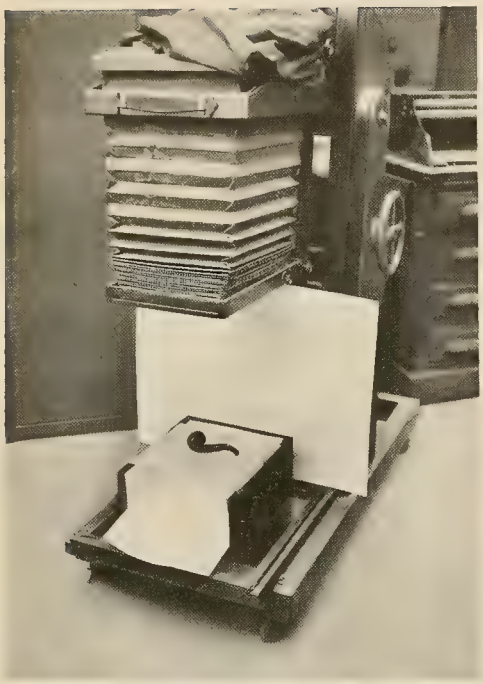


Fig. 1, showing "light box" for photographing objects with white backgrounds

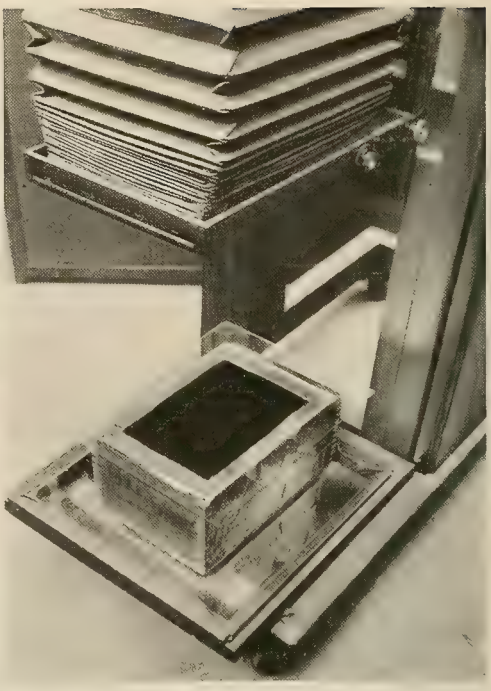


Fig. 2, showing the "dark box" for photographing objects with black backgrounds

and the resulting background will be as black as the proverbial "ace of spades." Should particles of dust cause white spots, they are easily etched out of the negative with a sharp knife.

Reflections

Sometimes, however, the operator has difficulty with the use of clear glass, owing to reflections appearing across the plate. In a studio or other room, with the light coming from one source only, such as from the usual skylight, the reflections should be eliminated by fastening to the underside of the camera a piece of dark blotter or cardboard, with a hole cut to accommodate the lens. This "dark ceiling" over the object should be as large as possible without cutting off any of the light necessary for taking the picture. In makeshift studios, especially where the light comes from more than one direction, reflections are bound to appear unless we resort to a tissue-paper hood. This is merely a large cornucopia made of thin white tissue-paper or tracing cloth, extending from the lens down to the glass holding the object. Of course, this will prolong the exposure to some extent, but if the reflections cannot be obviated in any other way the results obtained are well worth the effort.

Gray Backgrounds

We now come to gray or neutral grounds, which are the most difficult of all, but are very necessary if the best effects are to be secured with many objects one is called upon to photograph. A yellow apple, an orange, a pearl-handled knife, articles generally which combine several colors, can be ren-

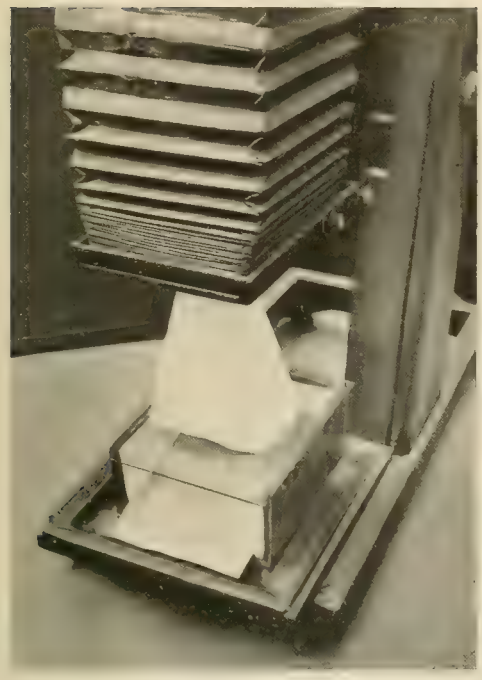


Fig. 3, showing the tissue-paper hood to prevent reflections

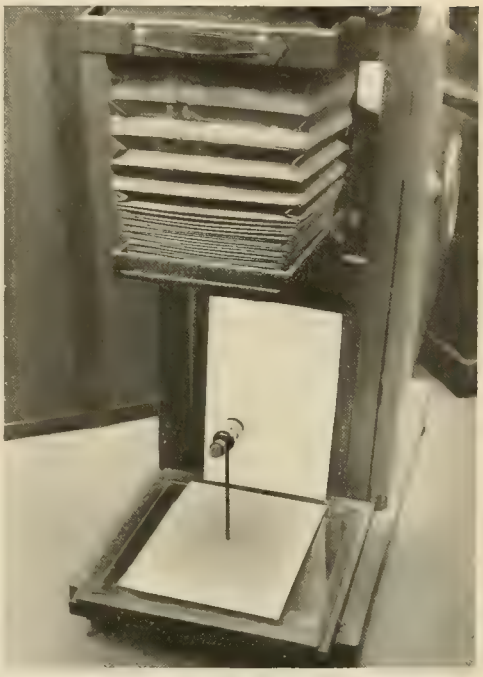


Fig. 4, showing the invisible support for photographing objects with gray backgrounds

dered to much better advantage with a neutral ground, and the operator should never cease until this phase of the subject has been brought thoroughly under control.

One method is to use the "light-box," but with gray cardboard underneath and a clear glass to hold the object. If the lens is to be stopped down considerably, the mottled appearance from bringing the corrugations into focus can be eliminated by moving the cardboard slightly a few times during the exposure. Too much emphasis cannot be laid upon having the glass clean and free from dust, as each little particle will cause a white spot on the print, which is somewhat difficult to eliminate by retouching, and if the prints are glossy, spotting cannot be resorted to to the best advantage. If reflections are encountered, they can be taken care of as suggested above in the case of black backgrounds.

Another excellent method for securing clean gray grounds consists in using an invisible support for holding the object. The writer uses a 9-inch section of ¼-inch brass pipe, soldered vertically to a metal base. A ten-cent store curtain rod and a four-inch square of tin will answer admirably. If desirable, a T-joint can be made to fit in the up end, and this, with the addition of a little modeling clay, will readily support any small object. The pipe support, of course, is run up through a piece of gray cardboard, and the writer has found the light side of an 8 x 10 gray mount the most adaptable for this purpose. If a long or heavy object is to be photographed,

two such supports can be employed. With this method there is no chance for reflections, shadows are eliminated, and the dust and corrugations in the board are too far out of focus to cause any trouble.

In photographing a rather dark-colored object where a long exposure is required, a darker colored card than usually employed should be used or else so much light will be reflected as to make the background practically white. This can be controlled, however, by shading the light gray card with tissue paper or otherwise during the exposure.

Still another method of securing gray grounds, which is quite dependable, but permits the casting of a shadow, is to place the object on a piece of very fine (mud-ground) ground glass, backed on the underneath side with black paper. The glass must be clean, however, and the surface fine and smooth, or else the little corrugations will catch the light and give an unpleasant effect.

TUMOLO CREEK, NEAR BEND, OREGON
Photo by H. W. Barr
Made with Struss Pictorial Lens, 9-inch focus, stop F 8, panchromatic film, K 2, color filter. Time of exposure, 2 seconds

He can who says he can—and backs it up with earnest work.—Art Magazine.

The Sixth International Salon of the Camera Pictorialists of Los Angeles

By James N. Doolittle

With Reproductions of Some of the Pictures

If there was any skepticism last year over the possible outcome of the somewhat radical departures from the common standards which have threatened the stability of photographic organizations throughout the country, it has been effectively dispelled by the unqualified success of the Sixth International Photographic Salon only recently closed.

The effort to create higher standards of pictorial excellence, to reawaken a waning interest on the part of some of the well-known photographers, to invite the work of others entering the field of camera art and to stimulate public interest has been richly rewarded by the plan adopted last year. In the face of internal opposition and not a little severe criticism from various sections of the exhibition world, the Camera Pictorialists of Los Angeles determined upon the policy of hanging a lower percentage of contributed prints.

A survey of the work submitted here during the past six years, together with a familiarity with work shown elsewhere, has offered the conviction that in nearly every instance the number of prints could be diminished by at least 50 per cent without the impairment of the show as a whole, but, on the contrary, with decided benefit.

In selecting material for this year's exhibition, each juror asked himself not whether a print were good enough to be hung, but whether it could stand comparison with the best on the walls.

The result was not a gallery overflowing with nearly every contributor represented by at least one print, but a collection of subjects which will bear the closest analysis and very few of which will suffer by comparison with its neighbor.

It is interesting to note the growth in popularity of the oil and bromoil processes. Evidently the pictorialist has arrived at the realization that commercial papers cannot allow him sufficient latitude of expression, that a commercial product must necessarily impart an appearance to the print that destroys individuality. The bromide print seems to be losing caste.

Practically all the foreign work was in the controlled processes, and in every instance the technique was of a very high quality.

While it is usual to encounter a goodly quantity of poorly executed subjects in what are generally regarded as the more difficult processes, it is an amazing fact that the majority of rejected material consisted of a depressing assortment of truly bad bromide prints. One can criticise a sub-

ject on its pictorial merits, for such merits exist with the individual according to his taste, but technical quality is such a definite quantity that it is difficult to understand why a contributor cannot be his own jury of selection—or rejection—before he goes to the trouble and expense of sending his prints to a salon.

While the American seems a most prolific producer, there is a lack of the sincerity that characterizes most of the foreign contributors. There is little evidence of the creative spirit, with too much of the tendency to render that which is merely pretty.

That school which seeks beauty in kitchen sinks and utilizes sundry domestic articles with which to construct imaginary triangles or to lead the unwary into the belief that a new order is about to spring into being, is happily absent. We are thankful that there are a few conservatives who can find beauty in nature and able to portray it within the limits of his medium.

Since the photo pictorialist, in a century, has but traveled upon the heels of the painter, it would be well to wait upon his brother artist and see whether the "modern tendency" leads him before blindly accepting something that neither appears to understand.

American and Foreign work it about evenly divided, as was the case last year, 15 countries being represented, with a total of 218 prints by 84 exhibitors.

The Los Angeles Museum of Art has formed the nucleus of a permanent photographic collection, and have recommended the purchase of eight prints from this Salon, in doing which a valuable precedent has been established in recognizing the place in the field of art which photography is destined to fill.

Note.—Camera Craft has during the past year devoted considerable space to reproductions of selected pictures. We did this because we wished our readers to have the benefit to be gleaned from the study of these Salon prints. They constituted the best, chosen by various juries in different sections of the country, and on that account are valuable in giving a broad view of the advance in pictorial photography.

There exists these days a very lively interest among photographic workers all over the land, and photographic salons are springing up everywhere like the proverbial mushrooms. Of these exhibitions some have become of real importance, and it is necessary to take notice of their doings if we wish to keep up with the story of modern photography.

Among the leaders of this forward photographic movement will be found the Camera Pictorialists of Los Angeles, California. In this association we have a body of enthusiastic and earnest workers who can and do force attention from the rest of the photographic world. Their aims are high, their intentions the best, and their exhibition something to be proud of.—E. F.

"SCHNEESCHAUFFLER"
Oil Transfer
Camera Pictorialists
Los Angeles, 1922
By ADOLF FRITZ
Vienna, Austria

The Making of a "Tri" or Three Color Transparency

By Frederic G. Tutton

The Club Photographer, England

Much has been written and said about the making of a natural color transparency by the Paget and Autochrome Screen Plate process, that the average photographer does not know that there is another method whereby some of the most beautiful and brilliant transparencies can be obtained, and even in the lantern show upon the screen with a brilliancy not to be surpassed by either of the two methods mentioned above. This process is termed "Three-color or Tri-color Photography," and in the author's opinion results can be obtained, particularly against the light, that far surpass either of the present-day screen plate method.

As this paper is written particularly to the tyro who knows practically nothing about color work, perhaps a short explanation of the theory of color photography might help him to grasp the few essentials for success.

You probably all know how by means of a spectroscope the composition of white light may be studied, how on looking through this instrument a continuous band of color is presented to the eye, commencing with red, through orange, yellow, green, blue, until finally violet is reached. You also have probably heard of the theory given by Dr. Thomas Young and Professor Helmholtz, namely, that all these colors may be formed from three fundamental or primary colored lights—red, green and blue-violet. Tri-Color Photography, then, is based on the principle that all colors occurring in nature can be split up into three primary or fundamental colors—red, green or yellow, and blue can be formed again from these. If the image of a colored object is split up photographically into three constituent images, of which one reproduces only the yellow, another only the red, and the third only blue parts, these monochromes will, if properly superimposed, give a representation of the objects true to nature. To split up the image into the three primary colors, light filters or color screens are used, and these screens are so adjusted that if in the path of the ray of light which forms the image on the plate a blue filter is inserted, it transmits all rays except yellow. In other words, the negative when developed will have the red and blue represented by a deposit, but the yellow, or any color containing yellow, will be represented by more or less bare glass, thus the positive from this negative will only produce the yellow print. During the exposure a green filter, which only transmits green, blue and yellow but absorbs the red, is used. In the negative thus obtained, green, blue and yellow will be repre-

"NIGHT'S AWAKENING"
Bromide Print
Camera Pictorialists
Los Angeles, 1922
By JOHN M. WHITEHEAD
Alva, Scotland

sented by a deposit, and red clear glass. In printing we shall obtain a red transparency. Finally, to obtain the blue an exposure is made behind an orange or red filter, which transmits red and yellow and absorbs blue, the negative will show red and yellow dense and the blue clear glass, thus giving the blue positive.

Filters already adjusted can be obtained from most makers of Panchromatic plates, and it is advisable to purchase the filter from the makers whose plates you decide to use.

Having exposed your plates behind the respective filters, the plates should be marked in some way—in the dark room, of course—so that when developed you will know which filter was used for the particular plate. In the authors' own practice he always marks on the corner of the plate I for red filter, II for green filter, and III for the blue-violet filter. The plates are always exposed in this order. Exposure should be full, so that details in the shadows are recorded, and the plates should be developed together at one and the same time. Development should be aimed to produce a fairly soft negatives; hard negatives are apt to render the resulting transparency somewhat hard, with detail lacking in the high lights.

Now comes the part of the process where the skill and personality of the worker plays an important part, and that is the making of the transparency. Personality is put here, as by the method to be mentioned the worker has it within his hands to alter, within limits, the result of the transparency, whether too much or too little of any one color is required, or whether the whole is required to be brilliant or somewhat dull.

There are several methods of producing three-color transparencies, but the one given below is about one of the simplest and most economical.

From the negative taken with the red filter a transparency is made in black and white upon an ordinary lantern plate, a somewhat denser image should be aimed for, as during the subsequent bath it loses a little in depth. It should be well fixed and washed for at least half an hour in running water. It should then be placed in the following bath:

Ammonium Ferrous Oxalate	8	grs.
Potassium Ferricyanide	8	"
Glacial acetic acid	84	m.
Water	3½	ozs.

In this solution the image quickly assumes a blue tone. It should then be washed for a short time and immersed in an ordinary acid fixing bath to remove the silver compound. Too long in this bath is not advisable as the bath attacks the image left and gradually dissolves it away. After well washing it should be placed for one or two minutes in a 1 or 2 per cent solution of hydrochloric acid; the color is converted by this into a brilliant greenish blue. The plate should now be washed in repeated changes of boiled or distilled water and dried.

To produce the yellow image, a positive transparency from the blue filter negative is made with films, using either the roll film variety or one

"GROSCHNEN"
Oil Transfer
Camera Pictorialists
Los Angeles, 1922
By C. PUYO
Paris, France

ot the flat films now on the market. If dried after fixing and washing, it should be thoroughly wetted and placed in the following bath:

Stock Solution.

(a)	Potassium Ferricyanide	124 grs.
	Water, boiled or distilled	3½ ozs.
(b)	Lead Nitrate	124 grs.
	Water, boiled or distilled	3½ ozs.

Working solution (a) 1 oz. 6 drs., (b) 95 mins. Acetic acid, a few drops. This bath should be filtered if it becomes turbid.

The film should not contain the slightest trace of hypo, otherwise spots will form. The image will bleach out white and then appears to be intensified to a notable extent, and for this reason the transparency should not be developed too strongly. When bleaching has penetrated through the emulsion, well wash until all trace of yellow stain has disappeared, then place in the following bath for a few seconds:

Stock Solution.

Potassium Bichromate	37 grs.
Water	3½ ozs.

Take one part of above to one part of water.

Wash again until all yellow stain has gone from the high lights and dry. Varnishing this film with one of the transparent varnishes on the market renders the image more transparent.

It is in printing from the green filter negative for the red constituent image that rather more skill is required. Old and useless films should be fixed out in hypo with a little potassium ferricyanide to clear the emulsion from fog, well washed and dried. They are then immersed for two minutes in the following solution, at 60 degrees F.:

Ammonium Bichromate	27 grs.
Strong Sulphuric Acid	6 drops
Water	2 ozs. 1 dram

Rinsed in clear water and dried in the dark.

Printing is carried out in daylight until the image is well seen in a brownish color: it is then removed from the printing frame, well washed for half an hour in frequent changes of water—not running water. The film should then be immersed in the following solution:

Magenta Red Dye	16 grs.
Hot Water	4 ozs.
Acetic Acid	10 mins.

for about 20 minutes, so as to give the chromated image plenty of time to take up the dye. Rinsing in water made acid with acetic acid until the high lights are clear of the dye, completes the operation for the red film.

We now have three positives in their respective three colors, namely, blue upon the glass, and a yellow and red film, and all that now remains is to superimpose the three images on top of one another to complete the picture in all its natural beauty.

LEA HENNEBERG
Plumed Tragedy
Kodak Print
Los Angeles 1921
By LEONARD MISONNE
Gelatin Bromide

The blue slide is first placed in a retouching desk with the film uppermost; upon this is laid the yellow image, and moved about until the two images are in register, a little touch of seccotine is placed on the underside of each corner of the film, and the two pressed well into contact, a cover glass is laid over, and the whole put under pressure for about 24 hours for the glue to dry. Laying the yellow image should be done in daylight, as it is very difficult to see the yellow image during artificial light. We now have the picture in two colors, and if carefully superimposed no fringing of the colors will show. It now remains to fit the red over the green image, which is done in exactly the same way as with the yellow film, but in this case the picture will be seen in all its original colors. After cementing the corners and leaving to dry under pressure for 24 hours, the picture is masked and bound between a cover glass with lantern strips.

Anyone making these transparencies for the first time will be astonished at the results—shadows are transparent, high light with color, and the resulting picture more or less under the control of the worker.

The above operations sound more difficult than the operation really is, and the author trusts that it may be the means of inducing many others to take up this branch of photography. The difficulties, if any, are easily overcome with a little practice and patience, and when once a fair start has been made, and the subject thoroughly grasped, there are but few who will have any desire to abandon the work.

(The author of this article obtained a medal at the R. P. S. Exhibition for a slide by the process described.—Ed. The C. P.)

SILENT WINTER

"SIRESA."
Oil Transfer
Camera Pictorialists
Los Angeles, 1922
By A. VICTORY
Madrid, Spain

A Camera for the Purpose and the Explanation

By Edgar Felloes

With Illustrated Example

Better a camera at any price than be without one altogether. During our apprenticeship we at least are able to acquire a certain familiarity with photographic manipulation, and in good time we graduate to the more elaborate class of instrument. Most of us do this.

The manufacturer's catalogue, intended to help buyers in their selection, often confuses, the prospective buyer having such a vague idea of his requirements. I am writing this with the hope of helping some in this respect, for with a clear understanding of his needs the matter of camera selection should not be difficult.

Amateurs today are giving much attention to small cameras—very diminutive ones, in fact. They appreciate the advantages of these instruments on account of their portability, and trust to an enlargement of reasonable size to show their finished work. This is undoubtedly a very practical way of enjoying one's hobby; the cost of operating these cameras is small, the negatives secured by the best makes are remarkably good, and for certain kinds of work these little cameras fill the bill perfectly. Besides the pleasure they give, they are useful to supply "copy" for illustrative purposes.

For a really practical small camera I personally favor one making a square picture. The square shape is not popular, but the reason for that is it has not been on the market long enough to have workers note its advantage. Let us not forget we use small negatives with the intention of ultimate enlargement. The shape of the negative is quite a secondary consideration. We must admit, we can secure more varied proportions from a square than we can from any other shape. We can select either a perpendicular or a horizontal panel as we choose to the limit of the lens definition. The picture being square, the camera need never be turned on its side, we are always ready, we decide on the shape of the picture later. At present I am only familiar with one camera of these proportions on the market, a 2¼ x 2¼, but it is likely other sizes will follow among the small cameras.

There is another point in favor of small cameras which should not be overlooked, that is, the wonderful depth of focus possessed by the lenses fitted to them. Unless one is careless, the question of focusing demands little attention, and in a large proportion of cases we can operate at a set focus. Naturally this is a time-saver, and often determines our success.

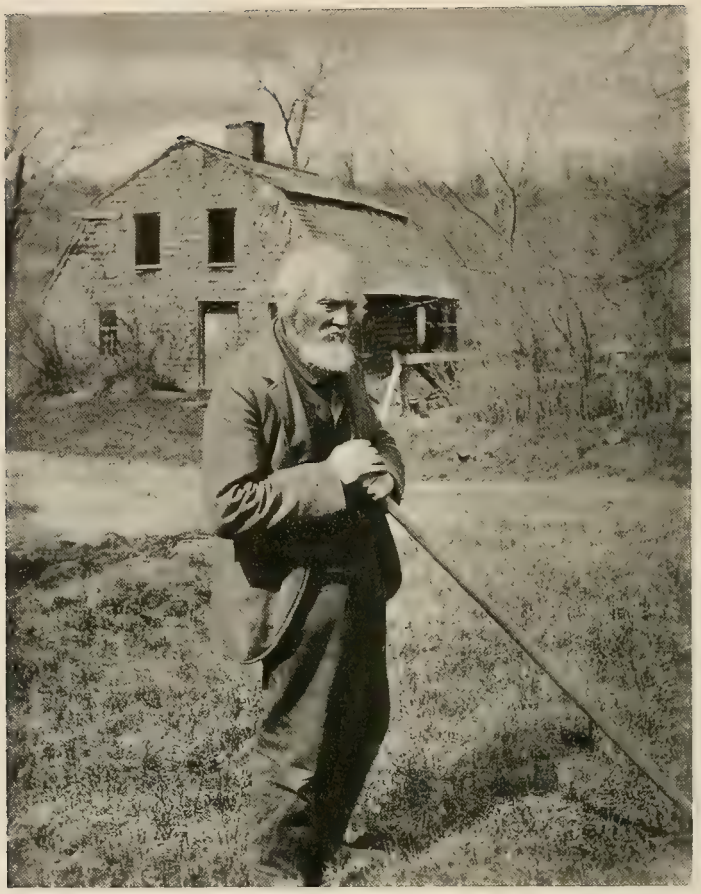
There is another type of amateur photographer, who is interested only to a limited degree in this branch of photography, and workers of this class

usually favor the pictorial. There is a general belief that a photograph, especially a good photograph, is necessarily a picture; it may be, but this does not follow. There is a difference between the two, just as there is a difference in the flavor of certain fruits, yet this difference is difficult to describe. Perhaps what I am about to say may help some to distinguish the dissimilarity. It has nothing to do with soft focus, matt surface or any kind of medium. There is a different quality, a different intent, and for this purpose a different camera is advised. Not that I mean to infer that the cameras already recommended are incapable of giving pictorial results, but they do not give these results so conveniently or surely. The kind of camera particularly suitable for this work is of the reflecting type. One make is known as the Graflex and another as the Reflex; the general principle is alike. The object or view is reflected by means of a mirror on to the ground glass and we don't guess what we are doing. Cameras of this type naturally are considerably heavier than the pocket cameras we have been considering, but the weight of the smaller sizes is overlooked by the enthusiast. My own instrument weighs 4½ pounds, it takes 3¼ x 4¼ negatives, and I forget the weight in the knowledge of what the outfit will do.

The depth of focus spoken of, in reviewing the advantages of the small camera, invaluable as it is in securing perfect photographs, is really a detriment in obtaining pictorial results. The essence of the pictorial quality in a photograph is suppression. We accentuate what we need by suppressing what we don't need. Depth of focus and suppression are incompatible.

The picture that gives the most satisfaction is the picture that suggests, that encourages imagination. The photograph that shows everything suggests nothing, neither does it encourage imagination. Therefore, as a picture it is disappointing, but as a photograph it may be a perfect success. Is there not a difference? I should like you to appreciate that difference.

A picture is usually a representation of an object or objects on a flat surface. This has but two dimensions, length and breadth. On this two-dimensioned plane we have by artifice to suggest many planes and many dimensions, and for this purpose we have recourse to perspective, both linear and aerial. We need both to satisfy the longing for happy representation; either one by itself will not satisfy. The photograph of great depth of focus gives us only a representation in linear perspective, and that very quality the average photographer so much stresses under the name of definition is the very thing that destroys the impression of atmosphere. This important element sacrificed, we lose the sense of aerial perspective, which quality we must have to simulate a true rendering of nature. Thus it will be seen that the perfect photograph, which the photographer prides himself as being a truthful representation, is wholly incorrect and untruthful, and however good it may be as a photograph it is anything but a success as a picture.



A GOOD RECORD, BUT INDIFFERENT AS A PICTURE

The trouble with many photographers is this: they have learned to see nature through photography; if they would reverse this habit, they would find an improvement in pictorial work.

I am printing here a cut of an excellent photograph. As the record of a scene it meets photographic requirements perfectly, and inasmuch as it does so it demonstrates its pictorial weakness. This picture of the man with the hoe is "sharp" all over. Do not misguide yourself that had this picture been "soft" all over it would have been a better work, more artistic; such is not the case. There is a lack of selection and the pictorial element suffers in proportion.

Let us study the shortcomings of this photograph from a pictorial standpoint. We here see how the linear perspective is taken care of by the lens, at the same time note how the aerial perspective is destroyed, which is of no less importance if we desire to adequately show that other dimension, depth. It is better to exaggerate this quality than to ignore it. It gives the sense of space in our picture. Our impression is not so cramped.

The distance from the man to the cottage is considerable, but we are only conscious of that distance through the smallness of the cottage. In its insistent rendering by the lens, that is, by the abuse of the depth of focus, we have the representation of what might be called a doll's house. Had the focus been kept upon the man and the cottage been portrayed less distinctly, it would have receded more and have served better as a background. By suggesting aerial perspective the principal object, the man, would have stood out more boldly. And instead of our distance showing in inches it would have been suggested in yards; the mental impression would have been nearer to nature and far more satisfactory. Notice the definition of the door jamb and the definition of the window sills; they are as insistent as the lines in the man's face and his clothes. Would we notice these things in nature under these circumstances? We would not. And because we notice them in the photograph it cannot appeal to us as nature does. Yet in a picture we should strive by all the means in our power to reproduce nature's inspiration. We also notice the color of the window spaces, the shadow side of the house, the brilliant black in the break of the shingled roof are just as forceful as the deepest shadows in the man. Now, it is right here we appreciate the influence of aerial perspective. We must suggest the subtle change that comes over colors at various distances. In nature, where objects are in color, their diversity helps relief, in art, especially in monotone, we must be more insistent in tones, else we destroy our values and our relief.

The question of false values in our photographic work is often attributable to under timing. The use of a small stop is conducive to undertiming; also, the use of a small stop is conducive to depth of focus, and depth of focus destroys the sense of atmosphere.

For pitcorial work give the small stop a holiday—speed up your shutter if necessary.

The greatest and none too well appreciated value of reflecting cameras is the ease with which we may do selective focusing. The object of selective focusing is to make an otherwise brutal lens "see" what the human eye sees. There is always a point of interest in a picture, be it a painting or a natural view. This point of interest is what appeals to the eye first; it causes us to pause and to enjoy the rest of the setting. It will also be noticed the last thing the eye will dwell upon before leaving the spot will be a lingering look at that point of interest. It is a farewell; it is something the picture is remembered by. This being a fact, does it not behoove us to make a real effort to accentuate the point of interest in our work? And in what better way can we do so than by selective focusing.

For pictorial work at least let us forget what the text books have said about focusing. Their advice is splendid for diagramatic work, but for pictures it is open to serious question.

Here is a thought: When we gaze at an object we see it, but we only feel or are conscious of surrounding things. Scientists tell us the normal

eye when at rest sees only 15 degrees, and even less than that, clearly, and if your lens should show 60 degrees of "vision" you should rather ignore than proclaim the difference; it will be much better for your art.

If you have read this far, take a glance at the frontispiece in this number and you will be reminded that to accentuate we must suppress. The girl fishing could never be detached if the trees were fretted with leaves.

To sum up what I have said: If your tastes should run to photographic records of events and places, by all means favor the small pocket camera with a direct view finder and photograph from the eye-level and not from the waist-line. If pictorial work appeals to you, and you hope for a high average of success, look into the hood of a reflecting type of camera and then decide. The only law that might prevent you from owning a camera of each type is your pocket-book.

A VIEW ON SAN FRANCISCO'S WATER FRONT

Photographed by P. E. Brooks, with Cardinell-Vincent Co.

The winning picture in the November competition of the Commercial Photographers' Association, San Francisco.

This excellent photograph is interesting in that it shows the distinctly different aims of commercial men and pictorialists. For the purpose this picture was made, it meets all requirements; it shows everything just as it is. The pictorialist would find fault with the composition, because the interest is divided between the ferry-boat and the tower; they both "star." It is like two climaxs at the end of a story, an unfortunate state of things.—E. F.

Thirty-Six Good Exposures

By Harry F. Blanchard, New York

With Illustrations by the Author

That is just what I mean when I say thirty-six good exposures, and I made these pictures on six rolls of Ansco film of six exposures on each roll. My outfit consisted of an Ansco vest pocket camera fitted with an Ansco F6.3 anastigmat lens.

I was somewhat undecided what kind of camera I should take on my two weeks' vacation trip. I had all kinds of photographic outfits from a high-grade moving picture machine to a vest pocket camera, and after giving the matter thought I partly decided to take along a 5 x 7 Graflex, but the day that I was ready to pull out I took the little Ansco camera for good luck, and, believe me, it was good luck. I used it exclusively for every exposure, and am proud to say that I did not lose a single shot.

My trip to Ausable Chasm, N. Y., was a success, photographically. Our party started with the machines for a hundred and fifty mile trip, but I was unfortunate with my tires, which needed attention through punctures and caused a loss of fifty minutes.

At 3.30 we arrived at the chasm and descended the canyon, some 50 to 150 feet wide and about 175 feet deep. The difficulty in making good pictures here was the poor lighting. There were patches of sunshine in places, but the prevailing tone was gloomy and dark. My camera being a light one was easily handled, and with the shutter set at 1-10th of a second I knew I could get something of a picture by using my largest diaphragm opening, which was F 6.3. Thus prepared, I set out to get something like a picture from this chasm, for my friends and I had come a long way, and we were determined to "bring back the bacon." The only real snapshot I made while in the place was of the railroad bridge in the bright sunlight. For this exposure I set the shutter at 1-25th of a second and the diaphragm opening at F.16; this gave me a very satisfactory negative.

The next two scenes were made with shutter speed 1-10th of a second at F.16—the three pictures of "The Elephant's Head" in the distance, a close-up view of the Elephant's Head and the Pulpit, were all snapped in the 1-10th of a second with the diaphragm opening at F 6.3. As we neared the further end of the chasm, I came across a deep hole in the solid rock that had been worn there by continual churning of water many centuries ago; this hole is called "Jacob's Well." It is some eight or ten feet deep and quite dark. In order to make a picture of this hole, it was necessary to give a time exposure, with the camera held pointing straight down. I decided to try out the only scheme I could think of—that was to hold the camera

"THE ELEPHANT'S HEAD

as still as possible against the railing around the well, stop it down as small as I dared and still give it sufficient time. So, holding my breath for ten seconds, with the diaphragm F 32, I made the exposure, and as the illustration shows it came out perfectly. The next and last picture of the chasm was made with the F 16 stop, and a five-second exposure with given with the camera held against a projection of rock that was partly overhanging the board walk that ran the whole length of the valley.

After the last picture was taken, we hustled to our cars, and made the trip back to camp and pulled in under the covers at 10.30, and never

THE ABOVE PICTURES GIVE AN EXCELLENT IDEA OF THE QUALITY OF THE 36 EXPOSURES MADE BY THE AUTHOR

made a peep until seven the next morning; then we all did eat, that's the word.

The next morning one of the fellows felt rather frisky, so I made a snapshot of him jumping off a springboard; this snap was made in the 200th of a second in bright sunlight at F 6.3.

The photographs that were taken of the bathers required only one-half the exposure given on the land. The difference in exposure, as you perhaps know, was due to the reflected light from the water, and this re-

flection cuts the exposure in half, as you will notice that a large percentage of the pictures were made with the shutter set at 1-25th of a second while the diaphragm was set at F 16, and this opening and shutter speed will meet most every requirement for the ordinary run of snapshots on land, but, as stated, when making pictures on the water the shutter speed of 1-50 can be used instead of the 1-25th in bright light, and if working in hazy light the lens diaphragm should be opened to F 8 when using the different exposures.

The two pictures that were made on the porches at different times of the day and the exposures used were somewhat different. The one of the boy and girl was made in 1-10th of a second at F 8, while the other picture of the young lady was made in half a second at F 16; both pictures were made the same day, one in the late morning and the other late afternoon. Both subjects were in the shade, but the light was bright.

The little landscape and the group of the party were made in 1-5th of a second, with stop set at F 32 in bright sunlight. The camera, of course, had to be placed on a rest during the exposure; the time was too long to permit the camera to be held in the hands while making the negative. The last picture taken was the automobile on fire. This car passed us on the road at a high rate of speed, and some thirty minutes later we came to the place in the fence where the car had skidded off the road, torn up six fence posts, went end over end down a twenty-foot bank, and I just had to take a picture of it, as this was my first experience in seeing an automobile burning up. It was late in the evening and up in the mountains, where the light was poor and no place to rest the camera, so I did the best I could, set the shutter at 1-10th of a second, the diaphragm at F 6.3, held my breath and pressed the release, with the result shown in the illustration.

I did no developing while on the camping trip, and we were all surprised to find that I had made thirty-six good pictures out of thirty-six exposures, and every one of them will make a good enlargement. Some record, and I give all the credit to my little vest pocket Ansco and Ansco film, and I find it folley to carry a big 5 x 7 camera on a camping trip. On my next vacation, if all is well, I will take my vest pocket camera and my moving picture camera with me, and bring back some real live pictures.

This article is not written so much for a story as it is to show one how to make good pictures by using a few stops and shutter speeds, as three or four shutter speeds and stops or openings in the diaphragm will take everything in sight.

Teacher: "What is the shape of the earth?"
Bobby: "Round."
Teacher: "How do you know it is round?"
Bobby: "All right, it's square, then; I don't want to start an argument."—Inn Sides.

Human Interest and Light

By C. B. Larrabee

Photos by Winemiller & Miller, Inc.

By Courtesy of "Printer's Ink Monthly," New York

Note.—It has been said. the ranks of the professional photographers of today are largely recruited from amateur workers. Most amateurs, if they aspire to a position in this profession, think they must follow portraiture for a living. This is erroneous. Times are changing.

As a friend of the amateur photographer, Camera Craft would direct your attention to another field; it is a newer field, full of promise to the man of vision. We would say to you, study the advertising picture of today; you will notice a change, a striving with a higher aim. Here is a new niche for the thoughtful worker—try and fill it.—E. F.

Pick up a magazine and study the advertising illustrations. Some of them you will find vitally interesting, others won't even catch your eye, and there will be still others that get your attention all right, but somehow just fail to achieve the effect they desire.

Study these "borderline cases," as they say in psychology. If you will compare them with each other, and with the successful illustrations, in most cases you will find the answer to their trouble is light.

What makes an interesting advertising layout or catalogue page? White space, properly distributed through type and pictures. What makes successful copy? The proper knowledge of the contrast of words and phrases, of shades of meaning. Which is the most successful store on the four corners, whether they are in New York or Sartwell, Mich.? The one that is the most interesting and the brightest. Which package sells itself more easily? The package that shows an interest-making mixture of brightness and relief.

By throwing the light on the face of the model a beautiful and interesting illustration is obtained

Every advertiser knows the value of lights and shadows, whether he

The sheen and texture of Lissue are brought out in this still-life by the careful use of light. The addition of a dance order gives an added touch of life, which animates the pictures by suggesting the presence of someone just outside the frame

has ever analyzed advertising from that angle, or realized that words and phrases have their lights and shadows as much as a city street or a country driveway.

To the advertiser who is using illustrations light is of the greatest importance. It may make or mar his advertisement. Turn again to your borderline advertisements.

Here is one which shows a picture of a man shaving in the morning. The man himself is well posed, his attitude is interesting, but the effect of the picture has been killed because there are no shadows. He is dead from an overdose of light.

A page or two farther you come on another picture, this time a night scene, showing the street of a city with the lights ablaze—a subject that, despite its commonness, manages, like a sunset, always to be interesting. Yet the picture is a failure. Why? Because there is too much blackness. Smudges of black ink alternate with squares of white where the ink has picked away from the paper. This illustration is dying from malnutrition, from lack of light.

In one case the difficulty was a matter of art, in the other a matter of mechanics, and in the preparation of an advertising photograph the photographer must keep in mind always that he is working with both. His picture must be artistically right, but it also must be adaptable to mechanical conditions.

For instance, there is the Hammermill Bond picture. In composition it is all that could be desired, and at the same time it conforms to mechanical requirements. It is more than a good photograph; it is a good support for the selling idea, and that is the only excuse for an advertising illustration.

An illustration for an advertisement of Day Dream Perfume. The simple, interesting human-interest story that is told here owes much of its effectiveness to lighting

In each successful advertising photograph the attention must be centered on the product or on the idea which will sell the product? If you are showing salad dressing in your illustration, which is what is done in the Premier Salad Dressing picture, you must focus everything on salad dressing. In the Premier picture a kitchen table sits before an open window. The accessories are well chosen and carefully arranged. In their midst, but not in the centre, is a bottle of Premier Salad Dressing. However, the light has been so handled that the eye is led through the accessories up to the bottle. The result is a good advertisement for salad dressing. This picture would sell its product without a word of copy.

The bottle of Premier Salad Dressing, despite the fact that it is not in the optical centre of the picture, is given the chief place, owing to the careful lighting

When the photographer is working with the human figure he at once gains for himself a certain amount of human interest. People like pictures of people because such pictures tell a story. But whether that story will be interesting and alive or uninteresting and monotonous depends largely on the posing and the lighting. No small share of the burden falls on light.

Look at the Hammermill Bond picture again. There is a story in it because there is always a story in a letter. But interest is brought to the story by the fact that the light is centered on the letter, while at the same time it throws a reflection of the girl's head in the mirror. In the Day Dream Perfume picture six figures tell the story of the conflict between the popular girl and the wallflower. Lighting throws the one girl into prominence and pushes the other two into an indefinite background.

In the Hammermill Bond Picture, light is used to lead the eye across the picture to the envelope held in the girl's hand. This is the type of illustration which effectively reinforces good, selling copy

In this picture, too, it is interesting to see where the lights come from. One light thrown on the scene would etch each head flatly against the background. Instead of that, each figure stands out with cameo clearness. This is done by throwing lights on the figures from behind as well as from the front.

The dignity and solidity of a financial institution are brought out in this photograph of a portion of the interior of the Strauss Building on Fifth Avenue

However, once you have taken away people, light is called upon to carry almost the entire burden. In the still life there is inherently no human interest. But in the successful advertising still life there is always human interest. The agent that brings interest is usually light.

A box and a handkerchief photographed carelessly are two inanimate objects. But when a light is thrown across them, and another light placed beneath the handkerchief, as in the Lissue picture, the result is a picture that has suddenly been animated. The sheen and the texture of Lissue are emphasized. Moreover, Lissue is not

just a handkerchief material; it is the material for a handkerchief placed on a table near which stands someone about to reach forward.

Proper lighting so often succeeds in peopling the frame of the picture. The frame of every still-life illustration should be peopled. The still life fails if it does not suggest that there are people just outside the vision who are waiting to use the product. If it is an automobile, it must create the feeling that the door behind it is just about to open. If it is a traveling bag, there must be a man or woman just beyond the picture who is coming forward to pick it up.

As a human interest agent, light is supreme. In the Strauss Building picture it suggests solidity and welcome. In the Hammermill Bond picture it hints at fine quality; in the Premier picture at a delicious product used in the best kitchens. All the way through a magazine you will find light bringing interest to otherwise colorless pictures, just as a little sweep of sun along a gray street will bring color and life to its people.

Despite its flexibility, light is one of the hardest elements to handle. A good photographer fusses as long, or longer, over the lighting of a picture as he does over its conception and composition. In staging a picture an art director will often change each figure or piece in it several times so that they will conform to the needs of proper lighting.

All the care given to lighting, however, is amply repaid in sales results. The best lighted picture has the greatest attention value. This applies not only to photographs but also to every other kind of illustration.

Of course, the advertiser must remember that he is selling a product and not running an art course. Every beautiful picture is not a good advertising illustration, but every advertising illustration can and should show a thorough knowledge of art principles.

In the end the illustration finds itself up against the hardest test of all—running through presses on to paper. No matter how beautiful the picture may have been in the original it fails if it does not print well.

Lighting is not simple, but it is vital to the success of advertising illustrations. For that reason every advertiser must understand the principles of good lighting.

Lighting is one of advertising's greatest human-interest agents, and human interest is one of selling's greatest helps.

How an Editor Got Rich: When he started he was as poor as the proverbial church mouse. Now he has retired with a fortune of $50,000. This money was acquired through industry, conscientious effort to give full value, indomitable perseverance and the death of an uncle, who left the editor $49,999.50.—Empeco Paper News.

The Mechanical Side of Exposure

By G. M. Milner

Knowing that it takes a certain amount of light to satisfactorily effect the emulsion on the film or plate, it would seem that any combination of stop and time to pass this amount of light would give satisfactory exposure.

Were 1/25th of a second with stop 16 correct in a certain light, 1/100th of a second at stop F-8 in the same light should give an equal exposure, disregarding depth of focus, and does with a properly designed shutter.

It is a known fact that, the accuracy necessary in gauging exposure increases with the increase in illumination. In other words, a slow dull light will stand an enormous variation either way from "correct exposure," without loss of the picture, whereas a fast bright light does not permit of much variation either way from "correct exposure," without over or under exposing.

This accounts for the "success," experienced by "good" guessers of exposure, when they stop down to 22 and give plenty of time, with the result of "perfect exposure." Often when they open the diaphragm up and give their lens a chance to work at its full efficiency, admitting a fast bright light to get inside their camera, the result is over or under exposure, generally under. Wild guessing at exposure will not give good results when the larger stops are used.

The newspaper photographer must snapshot nearly all of his material, generally in poor outside light. This requires a very accurate estimate of exposure, as the light passed through the large stop is much more active than when throttled through a small stop.

Lenses of the garden variety or pop bottle type, and shutters that work like a coo-coo clock are not to be found in his equipment.

Part of the efficiency of the focal-plane shutter is due to the fact that the slot is already open before it starts across the film or plate, thereby allowing the lens to work at the full efficiency of the larger stops.

The average low priced "between the lens" shutter has its blades in the way during a portion of 1/100th second exposure, every bit of which is needed. However, at the slower speeds such as a tenth of a second the difference in efficiency of the focal-plane and the "between the lens" type is negligible.

The loss of light due to sluggish action in the "between the lens" type is far more noticeable at the larger stops than at the smaller. It takes the blades longer to uncover and cover up the larger stop.

Were all shutters calibrated to pass a certain amount of light at certain marked speeds, regardless of the time taken up while in action, estimation of exposure would become much easier.

This would result in the higher grade shutters stopping more motion in a given time than the sluggish acting type.

From the foregoing we can assume, that the man who gets poor results when he opens up his anastigmat lens and works his shutter around 1/50th to 1/100th of a second, has a shutter that is untrue to him or that he is a poor judge of exposure, regardless of his "1/5 with a 22" successes.

While there are many fine shutters which open and close so quickly that the full time is allowed for the light to pass through the largest stop, there are many in which the blades throttle the light during a portion of a brief exposure, to a point below that which would pass the stop used, were the shutter blades not included in the operation.

The diaphragm or iris must be in the correct plane between the lenses to insure definition, and as it is very evident that the shutter blades cannot occupy this position also, it would indicate that, sluggish acting shutter blades assume the duty of the diaphragm, during a portion of the brief exposure at the larger stop, resulting in the loss of definition.

The shutter blades do not allow the iris to control the light through out the time of exposure, and not being in the proper position between the lenses, act the same as an iris not correctly placed.

A high grade lens not giving good results at the larger stops would thus, throw suspicion on the shutter, the action of which should be checked up before deciding that snapshot pictures of good quality are not to be had.

Do not assume that the writer believes that the "between the lens" shutter will not do for high speed work, but you may safely bet that he thinks a lot of them will not.

In fact, one of the best known newspaper photographers on the Pacific Coast uses a "between the lens" shutter on all of his work, and successfully "freezes" fast action, such as, diving, baseball, and acrobatic work, along with the usual run of difficult pictures, such as befall his lot.

Action and record pictures are just as interesting as pictorial, and if your lens opens up to F-8 or larger, and you have a good shutter, you can get them easily. Also taking pictures with a hand camera, at the higher shutter speeds and larger stops, is much more convenient than when used as the old style view outfit.

Every year more people are turning to photography for pleasure and pastime, and this is the result of the steadily increasing conveniences, simplifying the old time difficult processes necessary in the making of pictures.

When you put more effort into your business you'll take more profit out of it.—The Kodak Salesman.

Our Wild Flowers

Kindly Contributed by Our Readers

XX.—LARGE RAIN LILY

The name of this flower is derived from the fact that the flowers seemingly spring into bloom almost over night following heavy rains. There is another species which is taller and more slender than this. You might think from the bulb that this flower should be placed as a close relation of the onion, but there are other characteristics which keep it from being classed as a very near kinsman. The plant is thought by some people to be poisonous to stock and also dangerous for children to gather. It exudes a kind of sticky sap, somewhat like that which comes from broken onion blades, and this, perhaps, is what is believed to be poisonous. It is doubtful whether the plant deserves this reputation. Certainly it is a beautiful flower. The flower bud is already fully formed, and sleeps protected in the center of the bulb, waiting for sufficient rainfall to enable it to grow quickly to maturity. All it needs to do is to elongate its stalk and for the bud to open. This is why it is enabled to appear so quickly.

LARGE RAIN LILY

DAN E. McCASKILL,
The University of Texas.

Note.—We have received several photographs of wild flowers from the University of Texas; they are the work of Mr. Dan E. McCaskill, manager Photo. Lab. These studies have been made and colored for lantern slide lectures, to be used for public school instruction in Texas. The brief descriptive matter accompanying each print comes from the lecture that goes with the slides.

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Process

On looking over the catalogue of the Sixth International Salon of Photography, held at Los Angeles, we were struck with the number of exhibits done in "process." It is a noteworthy fact that the number of pictorialists choosing gum, oil, bromoil and oil or bromoil transfers as a medium of photographic expression is increasing. Whether this is for the good of photography is debateable.

It strikes us that this hankering after process is more than liable to cause photography to take second place, and process then becomes the all-important consideration. The picture is of more importance than the process; it always was and it always will be. The story is of more importance than the book that carries it. Why dissipate energy when there is more important work to do?

The great value of photography is its peculiar adaptability to economical reproduction of "limited runs." In this respect it stands alone among the graphic processes, and when used in this manner it flourishes. But when photography is burdened with the technique belonging to other arts it must retrograde, because we are not true to our medium. The history of other arts has proved this.

We do not contend that the photographic negative must and does meet all pictorial requirements. This in many cases it cannot do because of the intent of the worker. We do contend, however, that the negative may be made to yield what is desired of it, and the resultant effort will be true photography with its natural advantages.

Enthusiasts of process have claimed that one of its charms lies in the difficulty of duplication. This is probably true, but if we should essay another print, there is no knowing but it might be better than the preceding print. In this event the better print is worth more than the other, and though we may have labored just as hard, our labor is not worth as much. Thus we sacrifice a photographic opportunity; this should be disappointing to practical men. The matter of "texture," to which process men attach so much importance, will possibly be modified with time. Great water color painters have long been satisfied with the varied textures of the papers upon which they worked. It is comforting to remember that photographers may avail themselves of these very papers.

To us it seems a pity that photography should be valued because it looks like some other thing. Have we reached the state of being ashamed of the bridge that carries us over?—E. F.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

The Photography of Watermarks in Paper

[Among the subjects of exceptional difficulty which have sometimes to be undertaken by commercial photographers, and particularly by those doing work for legal purposes, are watermarks in paper, the reproduction of which is often of importance in determining the age or origin of a document. In the following article in the "Zeitschrift für wissenschaftlische photographie," Dr. O. Mente deals with this branch of work, and describes two new and ingenious methods for overcoming the great difficulties in obtaining clear reproductions of the watermarks in the case of documents which bear writing on both sides.]

In the case of documents, the paper of which has a prominent watermark, a reproduction of the latter may often be obtained. A further means towards improving the result consists in stopping development at the moment when the watermark has been brought up, whilst other parts of the image have scarcely begun to develop. Nevertheless, by such methods as these the result is only a moderately strong image of the watermark, more or less broken up by the writing on the document. Inasmuch as many watermarks do not include minute details, these ordinary methods often suffice for recognition and reproduction of their design.

More difficult subjects of this kind are, however, often encountered, for dealing with which the writer has devised other methods which have proved satisfactory in use. Various forms of procedure may be followed. For example, the original may be mounted between two glass plates and a negative made by transmitted light, and a weak positive transparency from this latter. This transparency is then brought into register with the negative, and the combination of the two is used for contact printing or enlarging. The final result by this method is, however, not appreciably better than that by those already mentioned.

Another method is to make the negative, again by transmitted light, on paper of card thickness, or, better, on lantern emulsion coated on opal. The positive transparency from this negative is bleached with mercury bichloride or solution of iodine in potassium iodide and brought into register with the negative. The result then is that the dark lines of the writing are greatly subdued when viewing the combination (through the bleached positive transparency) by reflected light, whilst the details of the watermark come out fairly well with skillful use of the process.

But the above methods require a considerable dexterity and judgment. Moreover, it is almost necessary to employ the wet collodion process on account of the facility with which negatives and transparencies of the required character are obtained by its means. And when all has been done the result frequently falls short of expectations. It therefore seemed advisable to seek a process which could be carried out with greater ease and certainty and was applicable to those cases in which the design of the watermark was closely entangled with the writing on one or both sides of the paper.

After many experiments the writer devised a method dependent upon the lesser thickness of the paper in those parts which represent the watermark. He first experimented with a method of taking an actual cast of the watermark in plaster of Paris. A thin film of plaster of Paris was coated on a flat glass plate on which the original was laid. More plaster of Paris was applied until a mass of fair thickness was obtained and the whole was then put to dry in a warm place. As soon as dry, preferably by means of a hot plate, the

original is readily detached from the plaster of Paris, and often comes away of itself. The relief which is left may be photographed in strong side light, or may be strengthened for photographing by coating it with black lithographic ink and polishing the whole surface with the ball of the hand.

It will be understood that such a process as this does not yield very satisfactory results with watermarks in weak relief, and, moreover, it suffers from the drawback that writing which has been done with a hard pencil on a compartively soft paper is reproduced by the casting method just as though it formed part of the watermark.

A much more satisfactory method, which works perfectly for the most delicate watermarks, even when accompanied by heavy writing, has been worked out by the writer in conjunction with Dr. H. Francke, and depends on the diffusion of gas through parts of the paper of different thickness. It is, of course, necessary that the ink which forms the writing should not obstruct the diffusion of the gas, otherwise the process could not be expected to yield better results than those by ordinary printing. In practice it was found by some preliminary rough experiments that the ink does not impede the diffusion of the gas (ammonia) in the slightest, and hence it was necessary only to devise the most advisable form of the process. After many fruitless experiments the following method of operation was devised and was found to be extremely successful:—A sheet of ordinary development paper is given a short general exposure (to fog it slightly), developed, fixed, washed, bleached in mercury bichloride, and dried. This "sensitive" paper is used for recording the action of the ammonia gas which passes in different degrees through the document. In order to avoid treating the original with ammonia solution a piece of flat, unglazed porcelain is soaked in strong ammonia, removed from the solution and allowed to become dry on the surface by short exposure to the air. The original is laid on this plate and the bleached sheet of development paper laid on it. The ammonia, discharged evenly from the area of the impregnated plate, then passes differentially through the original and darkens the white mercury compound existing over the area of the paper. The clear image of the watermark which is produced in this way may be readily strengthened in pencil.—O. Mente, in B. J. of Photography.

Flash-light Photography in Natural History

The Journal of the Royal Photographic Society, London, contains an interesting paper by Mr. Oswald J. Wilkinson on the above subject. It is an extension of the field of flash-light photography of large animals in nature to the insect and lower forms of life. As an entomologist I can appreciate the possibilities it offers, they are many. Mr. Wilkinson gives experiments showing the use of color plates and relates his experiences in recording the changes incident to the pupation of butterfly larvae. He particularly stresses the power it gives to discount the restlessness of insects. I might draw attention to another, namely the sharpness of surface detail which flash-light gives. I drew attention to it some years ago in photographing diseases of the skin.

The following working details will be helpful to those desiring to experiment. —H. D'A. P.

Working Details

As already indicated, it is now my practice to use a light-filter on all occasions, whether working with anti-screen plates or panchromatic plates, a procedure which, of course, necessitates an increase in exposure over the normal. For most subjects, maybe, a non-chromatic plate may suffice, and in those cases the Wellington anti-screen, with a K 1 screen, will require a charge of flashpowder equal to about 50 grains, with a 6-in. lens at F-23, and scale life-size, or 60 grains at F-32. These figures are approximate, and not intended to be absolute. Moreover, the character of the subject must be considered in all its aspects, as a subject such as the pupation series just shown will probably require a larger charge of powder than a spider resting on a white-washed wall, or a white

butterfly at rest, and conversely a smaller charge than a dull colored object resting on the ground will require.

When working on restless subjects, such as feeding larvae, or larvae changing to pupae, a very fast plate would seem to be most desirable, in fact, high-speed plus panchromaticism would seem to meet the requirements of the night photographers admirably on account of the necessity for using the smallest charge of powder compatible with efficiency in result. It would appear to me that the larger the charge, the greater the duration of the flash; but I speak subject to correction, and the smaller the charge the more brief it is. I must, however, confess to not having measured the speeds, nor have I been able to obtain any figures from manufacturers. Another important matter, and not the least, is that the powder employed on work of this character should be exceedingly dry, and finely ground, in order to insure an instantaneous flash; so very imperative, as a slightly delayed flash would probably affect the result somewhat detrimentally. A procedure productive of good results on restless subjects indoors is to use a high-speed panchromatic plate, refrain from closing the lens aperture more than is necessary for depth of focus, and use a small quantity of fine dry flash-powder, such as Johnson's, redried immediately before use.

Color Photographs

I should like to say a word in passing relative to color photography by flash-light. Experiments have been made by the Paget process, but the high cost of Autochromes being beyond my slender means, and receiving no facilities from the agents, I have been unable to do more than indulge in a single exposure on an old plate. The slides I propose to show now are by the Paget process, and will, I feel sure, be regarded as evidence of the practicability of producing pictures in natural colors in precisely the same way as those just shown in monochrome. A great advantage in figuring specimens in this way is that the process becomes a purely mechanical one; no calculation of exposure is necessary, and figures can be made as quickly as the specimens can be pinned upon the board and the charges of powder weighed and laid in position.

In regard to data relative to these slides, I may say the taking scale was unity with a 6-in. lens, stopped down to F-10. Plate, Ilford Special Rapid Panchromatic Paget Special Flashlight Screen placed between the lens components, and taking screen in the dark-slide. Charge of Johnson's professional flashpowder, 20 grains. As Messrs. Lumière supply a special flashlight screen also, there would seem to be no reason why photographs cannot be produced in Autochrome by flashlight as readily as by the Paget process. In both cases restless subjects can be dealt with, whereas this would be much more difficult by day, in fact almost impossible if the lens was stopped down to F-32.

Orthochromatic Sensitizing

About the year 1912 a French expert in orthochromatism, M. F. Monpillard, succeeded in increasing the sensitiveness of Autochrome plates to a considerable degree, about 30 times. In collaboration with M. L. Gimpel, a worker of great experience in the use of the Autochrome plate in Press photography, he obtained in good light exposures of the order of 1-100th of a second, and even was able to make slow shutter exposures of scenes on the stage under the ordinary theatre lighting. A number of these results were shown at the time at a meeting of the French Photographic Society, and were greatly admired. The process was also applicable to ordinary plates, conferring upon them both a greater degree of color sensitiveness in addition to general speed, and rendering them exceedingly effective for photography by artificial light. The extra-sensitised plates had, however, one great defect; they would keep for only a few hours, for not more than a day at the longest. M. Monpillard, however, hoped to overcome this difficulty. The method used for the extra-sensitising was not published at the time, but a sealed packet descriptive of the principle was deposited with the French Photographic Society. Recent circumstances having prevented M. Monpillard from continuing his work, the contents of the packet have been pub-

lished at his request, and it has been disclosed that the secret of this extra-sensitising consists in the addition to the mixture of the usual isocyanine and carbocyanine dyes (pinaverdol, pinacynol, etc.) of a small quantity of silver chloride previously dissolved in dilute ammonia. It is essential that as soon as the sensitising bath has been used any adhering liquid shall be rapidly removed with a whirler and the plates dried by a rapid current of air.

X-Ray Work

A Parisian medical practitioner of radiography, Dr. A. Zimmern, has recently observed that, without the air of an intensifying screen, exposures may be made on X-ray plates with a reduction of about 75 per cent in the time by previously heating the plate to 140 deg. F. Other conditions remaining the same, the same density is obtained on the warmed plate in this lesser time as that produced when working at 60 deg. F. Unfortunately, the installations commonly used for X-ray exposures are not well adapted for making use of this observation.

Apropos of X-rays, it may be mentioned that a recent paper by M. F. Holweck, a student and collaborator of Madame Curie, has gone a long way to step the gap which hitherto has existed between ultra-violet and X-rays in the great series of waves propagated with the same speed as light. This experimenter has been able to produce X-rays of relatively enormous wave length (extra soft rays), forming a continuous series with the ultra-violet rays of very short wave length obtained in the United States by Millikan.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

California Camera Club

In "The View Finder" for November: We notice that this club, like the Southern California Camera Club, has recourse to an illustrative embellishment for its first page. We would suggest to both these organizations the advisability of having cuts for this purpose made with a coarser screen. A 110 line screen will give better results on "the stock" used for these bulletins. The coarse screen does not reproduce detail equal to finer rulings, but this is more than offset by brilliancy. Cuts with fine screens should only be printed on coated paper.

Newark Camera Club Opens New Home

On Monday evening, November 20th, and continuing throughout the week, the Newark Camera Club held open house in is new home at 27 Franklin street, Newark, N. J. The Newark Camera Club has been buffeted about from one place to another during the last five years, and when their spacious home at 878-880 Broad street, Newark, N. J., was sold, it again became necessary to move and seek new quarters. A boarding house located opposite the city hall was purchased, and the club moved into temporary quarters until possession could be had of their home. The building was ideally located but a half block from the main street of the city and the purchase price reasonable. Money was raised to buy the building by selling non-interest-bearing certificates to the members in denominations of twenty-five dollars. By this method sufficient was raised to take title and allow a leeway for remodeling. On May 1st the club moved in and the MEMBERS began tearing out and building. The building was of the English type—three stories and basement with sub-cellar, and of brick construction. Every bit of wallpaper was removed from the walls, and the entire house rebuilt to suit the peculiar needs of a photographic organization. The first floor was made into one

large room, panelled, and the walls burlaped in a neutral tone. Under the burlap on the level of the eyes two strips of wood were sunk into the plaster about eighteen inches apart all around the room; this permitted inserting L hooks, two at the bottom and one at the top, so as to hold glass 18 x 20 inches, behind which one-man shows are hung. Club pictures in frames are hung over the one-man shows. The second floor contains the locker room with one hundred steel lockers, print room and wash room. The print room has accommodations for five, the dark room the same, and the work room or wash room has a wash tank for plates, another deep one for roll films, and a shallow one for prints.

The third floor contains two enlarging or projection rooms with a M-type Cooper-Hewitt lamp located between both rooms and furnishing illumination for both room. A lantern-slide making apparatus is also located here and a studio with dressing room, which is the pride of the club, finishes up the equipment. All work rooms have running water, including every booth in the dark room. Even the wood tanks were built by a member; in fact, every bit of the work necessary in the remodeling, altering, building and decorating, except the plumbing, was done by members. The club office and cloak room is in the rear of the first floor, and the basement contains the stewards' room and the kitchen.

On the first opening night the club was honored by the presence of Nikolas Muray, the eminent portrait photographer of New York, and on Wednesday night Rabinovitch, who was showing a one-man exhibit, as well as members of the New Haven and Elysian Camera Clubs, were present. Every evening finds the clubhouse full of admiring people commending the Newark members for their progress and beautiful home. Photographers, whether amateur, pictorial or professional, will always be welcome at the home of the Newark Camera Club. And members of photographic organizations, if in the vicinity of Newark, would do well to pay a visit to the Newark Camera Club and report to their own club or society just what can be done even in a photographic society if there is co-operation.

G. B. BUCHER, Secretary.

Our Book Shelves

Polly the Pagan

By Isabel Anderson (Mrs. Larz Anderson), author of "The Spell of Japan," etc., with a foreword by Basil King. With special illustrations and decorations, bound in silk cloth, $1.90.

A smart novel of European life and "high society." The story is unfolded in the lively adventures of a gay and vivacious American girl traveling in Europe, and tells of the men she meets in Paris, in London or Rome, her flirtations (and they are many and varied!) and exciting experiences; but the chief interest, so far as Polly's affairs d'amour are concerned, centers around the letters from a young American, in the diplomatic service in Rome, who is in a position to give intimate descriptions of smart life and Italian society.

"Mrs. Anderson knows the value of European stateliness as set over against our American slap-dash. In her game she plays the New World against the Old, and the Old World against the New, in the spirit of comedy, not without its tragic points. She uses her hemispheres like cymbals, for resonance and clash, for emotion and conflict, and also for joy, for wonder, for laughter and for the leaping of the heart."—Basil King.

The Page Company, publishers, Boston.

The Amateur and His Troubles

Conducted by Edgar Felloes

Bromide Paper Modifications

A glance at any recent exhibition or collection of photographs will convince the pictorial worker that of all the processes Bromide heads the list. The increasing popularity proves again and again that it readily yields to innumerable modifications.

The outstanding feature of the Carbon and Platinotype process is certainly its permanency, but ordinary bromide paper may be so changed by chemical means to such a condition as to resist all atmospheric influence. As compared with other papers, the scale of gradation is quite as good, and I think if properly understood exceeds either of the above mentioned. By careful manipulation and artistic ability it is possible to secure almost perfect tone-value in light and shade, together with a correct rendering of foreground, middle-distance and distance.

I fancy I hear the tyro asking the question: What must I do in order to be successful?

In the first place, it is essential to know more than the bare outline of the printed instructions, since knowledge creates power, and complete mastery eliminates failure.

Second, endeavor to make a good clean print, correctly exposed, and correctly developed. To many this may seem a stupendous undertaking, but with the exercise of a little patience and preliminary work the task is easily accomplished. A spare strip of bromide paper is all that is required for making a series of exposures. By careful examination of the image, it is by no means difficult to judge whether the dense parts require 10 seconds or 2 minutes, say, for example, we give 30, 60, 90 seconds. Having done this, we proceed to develop, and as a suggestion for those who intend to change the color of the print from the original black and white I strongly recommend the following developer:

Metol	50 grs.
Hydroquinone	25 "
Sodium Sulphite	1½ ozs.
Potassium Carbonate	¾ "
Water	40 "

The particular section which has had the proper exposure will appear to grow in intensity until a point is reached when the developer ceases to have any further action, proving that the reduction of the silver salts has taken place from the surface to the paper support.

This trial strip not only serves as a general guide, but gives a pretty correct idea of how to treat the print when considering the question of local control; adding or deducting so as to accentuate or subdue those parts of the picture which by judicious treatment give the desired pictorial effect.

You tell me I know all this; yet you fail to obtain those delicate gradations and richness of tone which immediately decide as to whether the result is a success or failure.

My candid opinion is that ninety per cent of the troubles in the later stages is due to carelessness at the very commencement.

Having very briefly dealt with the making of the print, I pass on to the real purpose of this article, viz., "Bromide Paper Modifications."

With regard to the bromide printing process itself, to me it is the ideal of the present day, and of all the manipulations toning is the most fascinating.

Some years ago Mr. Somerville managed to secure, after many experiments, a toning formula which replaces the silver salts by platinum, thus substituting the more unstable salts of silver with a fine metallic deposit of platinum. The formula used is composed of platinum, mercury,

and citric acid, the strength of which is given in grains per ounce:

Potassium Chloroplatinite	2 grs.
Perchloride of Mercury	1 gr.
Citric Acid	9 grs.
Water	1 oz.

In the case of sepia tones there are several methods of obtaining this brown-black, or brown-black-red color, but the best is obtained by using the above formula. The prints are previously soaked in water for 15 minutes, and rocked occasionally during toning. Time about 20 minutes.

As this toner is more expensive than any other, it is necessary to work with a minimum of solution. To accomplish this, enlargements can be economically dealt with by placing in a dish at an angle of 60 degrees, and applying the solution by means of a brush, sufficient coloring to allow the brush to be charged. A 10 per cent. solution of potassium bromide prevents staining from the platinum salts, but the tone will be of a slightly colder sepia. By ringing the changes I have obtained very satisfactory results with the ordinary ferricyanide-bromide bleacher, and either sodium sulphide, ammonium sulphide, or liver of sulphur as a toner, the quantity in each case being 10 grains to the ounce. Straightforward bleaching of the well-washed print, followed by the sulphide bath produced the familiar warm sepia color, but by reversing the order it is possible to obtain a richer color, entirely free from reddish-brown tints, and very similar to the platinum-toned prints.

For the benefit of those who care to make sundry experiments, I append a brief outline of the modus operandi. I have purposely omitted a long and tedious description, because the worker will find, if he follows each step, all that is required to give the desired results. If these manipulations are carefully adhered to, it is really surprising what a variety of tones may be obtained from an ordinary black and white bromide print; indeed, there is no other process that I know of so amenable to after treatment.

A—Sepia—
1—Soak print in water until limp.
2—A preliminary bath in sulphide solution.
3—Wash.
4—Bleach.
5—Bisulphide.

B—Brown-Black and Rich Dark Sepias—
1—Print is given a very short treatment in dilute bleacher. (The bleacher is allowed to proceed according to the degree of the depth of tone required.)
2—The partially bleached print is rapidly washed and placed directly in the toning bath.

C—Warm Sepia—
Bleach completely.
2—Redevelop either wholly or in part with a weak amidol developer.
3—Complete development with the sulphide toning bath.

D—Warm Sepia—
1—Redevelop the bleached print completely with the original developer.
2—Wash.
3—Bleach.
4—Sulphide.

E—Warm Sepia with Added Brilliance—
1—Prepare a bath of plain hypo 2 ozs. to the pint.
2—Prepare a weak solution of potassium ferricyanide. The print is first soaked in the hypo, and then transferred to the ferricyanide bath for a few seconds, and back again to the hypo, the process being repeated until the desired brilliance has been obtained. The print is then toned in the ordinary manner.
A. S. Dean, The Club Photographer.

Some Notes on Carbro Work

By A. H. Hall

So much of the carbro process is identical with ordinary carbon printing that anyone who has never made a carbon print and intends to work carbro could not do better than make a few carbon prints first. He will then be able to concentrate his attention on the special features of carbro when he comes to work it; and will not be liable, should he have a failure, to put it down to the carbro process when it may

simply be due to faulty handling in the operations of ordinary carbon work.

The basis of the process, the bromide print, is of prime importance, and the best print that is possible from the negative is required. It should be fully developed, and the exposure should be such that it remains in a normal developer for a minimum of two minutes, to ensure a sufficient depth of deposit of silver in the image to do its work properly on the tissue.

Any standard make of paper may be used—smooth platino-matt is the best—and though I have got excellent results from glossy bromide prints, they are usually prepared with an additional coating of gelatine to obviate stress marks, and I do not recommend them for carbro, as the action of the solutions may be retarded by the extra coating. The papers sold to give warm black tones by direct development, and gaslight papers are both suitable. But prints on these papers should first be bleached in the bath of ferricyanide and bromide which is used for sulphide toning, and redeveloped in a developer without bromide, say amidol or M. Q. with borax. Where great depth is required in the carbro, I prefer the warm black papers, and think the extra operations worth the trouble.

The print should have a white margin, as this acts as a safe edge for the tissue and also shows clearly if development of the bromide has been forced. If any tint shows on the margin, there is some general veiling of the image, and the print should not be used.

Having obtained a really good print, after fixing it must be very well washed. If it is dried before use, it should not be handled more than is absolutely essential, as fingers are apt to leave greasy spots on the surface which, though invisible, will be certain to cause trouble.

When ready to make the carbro, the print must be well wetted. The special solutions should be made up accurately; and, if the worker proposes to do this himself, the solution containing potassium bichromate can conveniently be prepared of such a strength that it requires dilution with an equal volume of water for use. The Autotype Co. makes a stronger solution to save bulk in postage, but this necessitates warming the solution in cold weather, as some of the bichromate is prone to crystallize out.

The working bath keeps well if it is filtered after use and kept in the dark; but if it is found that after some lapse of time the prints obtained give washed up high lights with normal procedure, the solution should be scrapped and a fresh working bath made up. In any case, the working bath should be kept up to a constant volume by the addition of fresh stock solution after use, and filtered each time. Probably the most important factor in the operations is the temperature—below 60 deg. F. the action is uncertain, but between 60 deg. and 70 deg. F. there is no difficulty on this score. The best temperature of all is 62 deg., and with an ordinary Beatrice oil stove I find I can maintain the temperature within a couple of degrees of this figure in my dark room.

Air bells must be avoided. The most usual cause is the use of too small a quantity of the solutions. The times of immersion of the tissue in both solutions should be accurately determined with a watch. I find 30 seconds in the formalin bath right for the majority of prints. Considerable control is possible, a shorter immersion increasing contrast; but it is not advisable to reduce the time too much or the high lights will wash up. Fifteen seconds should be regarded as the normal minimum time, and if further contrast is required the tissue may be allowed to remain in contact with the transfer paper for more than thirty minutes, which should be regarded as the standard time, and hotter water may be used for development.

In placing the tissue in contact with the bromide print, air bells and slipping of the tissue are possible troubles. The prints should be put on a level piece of board or plate glass and flooded with water to obviate air bells; while slipping, which might result in a double image, is prevented by placing a flat ruler over one end of the tissue as soon as it is put down on the print, and holding it firmly while the rest of the tissue is squeegeed down. Heavy pressure is quite unnecessary, and

the stroke of the squeegee should always be outwards, to push out before it any air that may be enclosed, though, if the tissue has been put down properly there should be none.

The tissue being left in contact with the bromide print for fifteen minutes gives quite sufficient time for three prints to be prepared before the first is ready for stripping. The time from which the fifteen minutes are reckoned should be marked on the back with a crayon. When the tissue is separated from the print, the operation of putting it down on the transfer paper is precisely similar to the previous operation, but if very rough transfer paper is used it may be necessary to use more pressure in squeegeeing.

Plenty of water should be used in development to prevent the temperature from dropping too rapidly, and a thermometer should be used to check the temperature. This is slightly lower than in ordinary carbon work, so that the interval before it is safe to strip the backing may be longer. Any bubbles showing in the shadows should be gently splashed with water, and development is then easily carried out by holding one end of the print and moving it to and fro under the water. Local control is possible with care; shadows may be lightened by gentle application of cotton wool under the water, and small high lights emphasized with a brush; but any considerable area that requires reduction should be dealt with by pouring hotter water on that part. Time and patience are necessary, for such reduction must not be hurried.

The film is hardened and the bichromate stain removed in the alum bath; with thick papers this is rather slow. I add about one ounce of potassium metabisulphite to thirty ounces of the alum solution and filter the mixture, as this is much quicker in action.

There is some variation in the behavior of different colors, and the easier ones should be tried first. Vandyke brown, ivory black, warm black, and terra cotta are amongst the easiest. In my hands engraving black sometimes gives hard results, and red chalk shows a tendency to wash up in the high lights. The mezzotint tissues which give dead matt results seem to give blocked up shadows, and are not recommended for a start. The operations are all simple enough, if attention is paid to detail; but to see them performed by an expert is a great help.—The Amateur Photographer and Photography.

THE MARSHES

For the Professional

In the Interest of Commercial and Portrait Photographers

What to Charge for Commercial Work

The proper price to charge for various kinds of commercial photography has always been a matter of doubt. You want to get a fair price, but you don't want to ask or charge less than is customary, nor do you want to hear your customer say that you are a robber. Commercial photography cannot be figured on the same basis as portrait work.

Abel's Photographic Weekly has published a chart, called Tabulation of Commercial Price Schedules, which gives the prices charged for every kind of work by leading firms and commercial associations in various parts of the country. With this to hand, you will never be at a loss to know what to quote, whether the work is done in your studio or away from your place of business. Also you can always show your customer this chart should he dispute your figures, and say he can get the work done for such and such a figure.

The chart is 22 inches by 17. It can be framed or mounted on linen for frequent use.

Copies can be obtained from Abel's Photographic Weekly, 421 Caxton Building, Cleveland, Ohio, at $1.00 each, and you will find it the best $1.00 investment you ever made.

Commercial Photographers' Association

A meeting of the Commercial Photographers' Association was held at the Solaris Grill, November 14th. The purpose of this meeting was to elect new officers of this Association for the coming year. The following members were chosen.:

President: Gabriel Moulin.

Vice-president: Cecil Blackmore.

Treasurer: Miss Olga Dahl.

The following were appointed as directors: Laurence B. Morton, Ralph Young and Chas. A. Love.

This Association, which comprises ninety per cent of the commercial photographers of San Francisco, now enters upon the fourth year of its existence, and all the members now realize fully the mutual advantage the Association has been to them. It is still a standing joke among the "boys" when in a reminiscent mood to contrast the general good feeling existing between this brotherhood today and the estrangement there was at the first meeting. Then those attending lined the walls of the room in their chairs and each waited for the other fellow to say something—to show his hand as it were.

The retiring president, Mr. Laurence B. Morton, has for the past three years occupied the chair and filled it to everyone's satisfaction. It called for a man of tact to direct a new organization, especially when some appeared to have a chip on the shoulder. Mr. Morton smoothed conditions beautifully, and he retires with all the best wishes and votes of appreciation from the members of a once "hostile camp." We have heard many a good thing said of the retiring president, and what gives pleasure is the simple truth. It will be noticed Mr. Morton heads the list of directors for the new year. It was considered poor policy to let a good man go.

Mr. Gabriel Moulin, the new president, has been a prominent member of the Association from the first, and there is no doubt the members made a wise choice when they selected him to fill his predecessors' place. Mr. Moulin has the entire confidence of his associates, and it was a foregone conclusion the choice would fall upon him; the vote for his election was unanimous. It is our privilege to know Mr. Moulin personally, and we feel satisfied the "Commercial Men" will have another prosperous year.

Miss Olga Dahl was re-elected treas-

urer. Everybody was perfectly satisfied with the business-like way in which she conducts her duties, and nobody was willing to see a change. It looks as if Miss Dahl is in for a life job.

Photographers' Association of America
Albert J. Cook, Secretary

New Postal Bill Introduced

Every photographer interested should get in touch with his or her Congressman and Senator immediately, asking his support for the following bill which has to do with the transfer of photographs from the third to the fourth class:

67th Congress H. R. 12957
In the House of Representatives,
November 23rd, 1922

Mr. Kelly, of Pennsylvania, introduced the following bill, which was referred to the Committee on the Post Office and Post Roads and ordered to be printed.

A BILL

To classify photographs and photographic films as fourth-class mail matter.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the classification of photographs and photographic films as third-class mail matter is hereby revoked, and hereafter such photographs and photographic films shall be classified as fourth-class mail matter, and shall be subject to the charges and mailing condition applicable to such fourth-class mail matter.

The above is the bill, notice of which appeared in the last issue, the Bill concerning photographs and films only and not including all third-class matter. A blanket Bill of the latter kind was published some time ago and will also be presented; but the above is the Bill in which photographers are interested.

Mr. Kelly, of the Post Office and Post Roads Committee, has assured the Association that he will do everything possible to see that justice is done and the Bill passed. Now it is up to each and every photographer to tell his representatives that in order to obtain fourth-class or parcel post rates on packages of photographs weighing less than four pounds, he must add pieces of plank or corrugated paper to his package to bring it up to the desired weight, thus cluttering up the mails with thousands of pounds of excess and useless weight, which can be done away with by the passage of H. R. 12957.

Amalgamated Associations Fix Convention Dates

Mr. Claud J. Fennel, Columbus, Nebraska, president of the Missouri Valley Photographers' Association, has informed this office that all preliminary arrangements have been made for the convention of that Association on March 19th to 22nd, at Kansas City, Mo.

The Photographers' Association of the Pacific Northwest will hold its convention August 28th, 29th, 30th, and 31st, 1923, at Victoria, B. C., Canada, according to word received from Mr. J. A. Zinn, Jr., of Seattle, Washington, secretary of that Association.

Artistic Booklet Received

"The Eye of the Camera is the Mirror of Life" is the title of a fine little booklet issued by McCray & Co. It embodies the following subjects: "Women should observe the following advice," "Men can assist the Photographer," "False Modesty," "Copies from Old Originals Our Specialty." Under the above headings, advice to those contemplating a sitting is given in a clever and tactful manner.

British Association Thanks Us

The following letter, addressed to Mr. G. L. Hostetler, president of the P. A. of A. last year, has been received from the Professional Photographers' Association of Great Britain and Ireland, Limited:

"I am desired by the president and council of the Professional Photographers' Association of Great Britain and Ireland, Limited, to thank you and your Association most sincerely for the kind messages and support you have given to our Congress and International Photographic Exhibition at the Princes' Galleries, London, W. Most especially we desire to thank you for the magnificent American flag you sent to us with your good wishes, which we prize very highly, and it will be taken care of at the home of the Royal Photographic Society.

Yours faithfully,

ALFRED ELLIS, Secretary.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.

If there is no officer in your State, address the General Secretary

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

STATE SECRETARIES

California—A. E. Davies, 1327 Grove St., Berkeley.

Colorado—H. E. High, 1023 Champa St., Denver.

Idaho—Eugene Clifford, 902 9th Ave., Lewiston.

Iowa—Harry B. Nolte, Algona.

Kansas—H. H. Gill, Hays City.

Louisiana—Samuel F. Lawrence, 1754 Laurel St., Shreveport.

Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.

Missouri—J. F. Peters, Room 408, Union Station, St. Louis.

New York—Louis R. Murray, 927 Ford Street, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

ALBUM DIRECTORS

Alabama—G. H. Brown, Box No. 333, Florence.

Canada—C. Deyo, 268 Dundas St., London, Ontario.

Colorado—O. E. Aultman, Plested Bldg., Trinidad.

Connecticut—Harry E. Carpenter, 389 Remington Ave., Bridgeport.

Florida—Capt. E. S. Coutant, Lock Box 73, Stuart.

Georgia—L. O. Surles, P. O. Box 434, Cuthbert.

Idaho—Eugene Clifford, 902 9th Ave., Lewiston.

Illinois—George A. Price, Box 286, Champaign.

Iowa—C. W. Parker, Mapleton.

Massachusetts—John Mardon, 10 High St., Boston.

Michigan—W. E. Ziegenfuss, M. D., 171 Richton St., Detroit.

Minnesota—Leonard A. Williams, 622 2nd Avenue South, St. Cloud.

Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

New York—Charles F. Rice, P. O. Box 245, Mamaroneck.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave., North Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2 Painesville.

Pennsylvania—L. A. Sneary, 2822 Espy Ave., Pittsburg.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—J. B. Obeim, P. O. Drawer M, Henrietta.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

POST CARD ALBUM DIVISION

The eighth issue of the semi-annual post card albums were sent en route last month, traveling through and comprising recipients of the states as viz: Ohio, Pennsylvania, Delaware, Connecticut, New York, Michigan, Minnesota, Oregon, California, Texas, Missouri, Tennessee, and South Carolina.

We would be pleased if such subscribers of Camera Craft as are not included in this route list would send a few post cards for the next or April issue. Especially desired are those from states not represented as yet. Do not hesitate to send your prints to the director for approval or to write in regard to these albums.

JOHN BIESEMAN, Album Director.

NEW MEMBERS

5209—A. J. Schneider, 231 No. 18th St., Portland, Ore.

2½ x 4¼ and 3¼ x 5½ Velox and Azo glossy of Oregon, Colorado, and Washington mountain scenery and also Oregon and Washington ocean scenery; for any kind of mountain, city, ocean, still life, snow scenes and park views. Class 1.

5210—B. Churchill Smith, R. F. D. No. 8, Bangor, Maine.
Class 2.

5211—John W. Russell, 510 Lowell St., Lawrence, Mass.
Class 3.

5212—R. S. Nightingale, c/o Progress, Clearfield, Pa.
Up to 3¼ x 4¼ D. O. P. of soft coal mines, mountain scenery, nature studies, fires, misc.; for good undraped figures and general pictures of interest. Class 1.

5213—E. W. Chapman, Box 86, Hynes, Calif.
3¼ x 5½ Azo of landscapes of California and Yosemite, National Park; for landscapes and places of historical interest. Class 1.

5214—John R. Lindmark, Poughkeepsie, N. Y.
Class 3.

5215—Miss Cornelia Clarke, 1322 West St., Grinnell, Iowa.
I desire to exchange only lantern slides.

5216—Joachim J. Arsenault, 121 Washington St., Rumford, Maine.
2½ x 4¼ and 3¼ x 5½, Azo and Velox of snow scenes, rivers, lakes, landscapes, animals and local views; for anything of general interest. Class 1.

5217—Wm. H. Watrous, 191 South Ave., Bridgeport, Conn.
4 x 5 and 5 x 7 Haloid, Rito of landscapes and water scenes; for anything of general interest. Class 1.

5218—Y. Hamada, Apt. 801, Mexico, D. F., Mexico.
Ansco A3, $2\frac{1}{8}$ x 3 Azo, of landscapes; for the same. Class 1.

5219—Luther L. Bruker, 211 Cartier Bldg., Ludington, Mich.
Class 2.

5220—C. G. Riddle, R. F. D. 4, Box 53, North Liberty, Ind.
V. P. to 5 x 7 Glossy Azo and Artura Iris of farm scenes and river views; for general views and bathing beach scenes. Class 1.

5221—P. L. Miller, Box 150, Estevan, Sask., Canada.
$3\frac{1}{4}$ x $5\frac{1}{2}$ Cyco of pictures of general interest; for the same. Class 1.

RENEWALS

3254—Vernon W. Hutchins, 39 Academy Square, Laconia, N. H.
Class 2.

5040—William H. Walton, 139 East 9th Ave., Homestead, Pa.
$2\frac{7}{8}$ x $4\frac{7}{8}$ Azo of Transcontinental photos, fires, parades, etc.; for anything of general interest. Class 1.

5131—W. H. Gannaway, 1440 W. St., N. W., Washington, D. C.
4 x 5 and $1\frac{5}{8}$ x $2\frac{1}{2}$ Azo of Washington and vicinity scenes and landscapes; for landscapes and anything of general interest. Class 1.

CHANGE OF ADDRESS

4712—John W. G. Winkler, 1506 Oak St., Little Rock, Arkansas.
(Was George, Iowa.)

4726—B. C. Eddy, 625 Central Bldg., Los Angeles, Calif.
(Was 803 52nd St., Oakland, Calif.)

5133—Geo. Engelson, Yakima, Wash.
(Was Pomeroy, Wash.)

5139—Arthur P. Hodler, 581 Hudson St., New York, N. Y.
(Was 1990 Madison Ave., N. Y.)

2990—Jas. L. Vaughan, Box 89, Kensington, Ohio.
(Was Belvidere, N. Y.)

4472—Harry E. Carpenter, 23 P. O. Arcade, Bridgeport, Conn.
(Was 389 Remington Ave., Bridgeport, Conn.)

4853—J. R. Meservey, 2 Gerald Terrace, Fairfield, Maine.
(Was Skowhegan, Maine). Class 2.

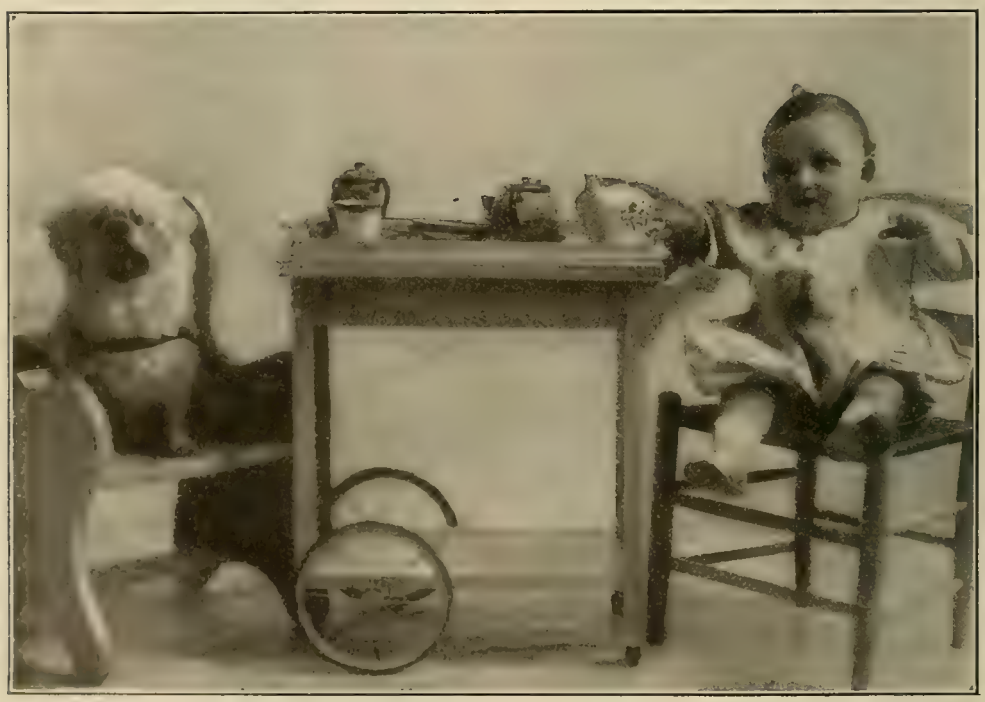
5061—Carl Kruger, Big Stick Lake, Sask., Canada.
(Was 1753 Ottawa St., Regina, Sask., Canada.)

5197—Ernest Magee, 5 East 135th St., New York.
(Was Monroe, N. Y.)

RENEWALS

2858—H. M. Sutton, P. O. Box 1076, Dallas, Texas.
$3\frac{1}{4}$ x $5\frac{1}{2}$ and 5 x 7 of views of Mexico and the United States; for the same. Class 1.

4891—Hugo Koehn, P. O. Box 609, Houston, Texas.
Snappy girl poses, for the same. Class 1.



WINNING PICTURE IN THE JOHN G. MARSHALL METEOR FLASH POWDER COMPETITION FOR JULY
Made by Valentine Ebel, Brooklyn, N. Y.

Notes and Comment

Reported by Wm. Wolff

Greetings of the year to all from the writer.

Samuel Cohen has opened a modern studio in Los Angeles at the New Goodman Department Store. Mr. Cohen has worked in such studios as Habenicht, San Francisco; Chickering, Boston; Wallinger, Chicago; and Witzel, Los Angeles. The craft wishes Mr. Cohen much success.

A. C. Heidrick, of Monterey, is making some very fine doretype of the 17-Mile-Drive and Cypress for the trade.

Carrol B. Clark has taken over the White Studio at Pacific Grove.

Holiday business with Shirley V. Bacon, Long Beach, Calif., was away ahead of expectation.

C. C. Green and the two Mrs. Greens (one his wife, one his son's) were kept very busy during Christmas rush.

Jos. Hubbel, of International Newsreel Company, Los Angeles, was in San Francisco a few days the end of November.

Mr. Powell, of Hanford, put in some electric apparatus for dark days that proved very satisfactory during rush season.

H. C. Jenson is in his new Selma, Calif., studio.

International Salon of the Pictorial Photographers of America

For many years there has been a demand for a representative photographic salon in New York—a demand logical, not merely from the location and size of the city, but also on account of its importance as an art and photographic center and as a magnet for country-wide visitors in search of what is newest and best.

With the institution of the Art Center and through its generous co-operation as a whole, the pictorial photographers of America, one of the founding and component organizations of that body, are enabled to announce an International Salon, to be held at the galleries of the Art Center, 65 East 56th street, New York City, throughout the month of May, 1923. These galleries are convenient of access, and are located in what has come to be the artistic nucleus of the city, and furnish ample, suitable, well-lighted space for an exhibition, if the entries warrant, of several hundred prints.

Every effort will be made to secure representative foreign photography, but we are equally desirous of showing a large collection of the best American work. In view of the importance which naturally attaches to this event, and which we shall aim in every way to signalize, we urge the early and earnest co-operation of all pictorial workers throughout the world.

The jury of selections will be announced in advance of the exhibition. Consideration of all pictures will be deliberate and impartial. Acceptance will be restricted to work combining high artistic excellence with perfection of technique.

It is probable that we shall also choose from the American section the contents of our next annual, **Pictorial Photography in America, 1923.**

Entry forms, with precise data, will be distributed at an early date.

WM. A. ALCOCK, Chairman, 44 Wall street, New York City.

G. W. HARTING, Secretary, 51 West 10th street, New York City.

Exposition of Inventions to Honor World's Greatest Inventors

One of the features of the Universal Exposition of Inventions and Patents, to be held in Grand Central Palace, New York City, February 17th-22nd, 1923, will be to celebrate, each day of the Exposition, one of the world's great inventors or scientists.

In view of the great interest shown by foreign governments in the Exposition, the first day, Saturday, February 17th, will be **International Day.** Then, the fol-

lowing week will open with Sunday as **Marconi Day** or **Radio Day**; Monday, **Steinmetz Day**, in honor of Dr. Chas. P. Steinmetz, the electrical wizard, of the General Electric Co.; Tuesday, **Edison Day**, in honor of Thomas A. Edison, America's great inventor; Wednesday, **Bell Day**, in honor of the late Alexander Graham Bell, who made the modern telephone possible; and Thursday, **Westinghouse Day**, in honor of the late George Westinghouse, inventor of the air brake and many other inventions that have made railroad travel safe, and founder of the Westinghouse Electric and Mfg. Co., also the Westinghouse Air Brake Co., Pittsburgh.

The object of this Exposition is to fulfill an important universal need, and it is intended to:

(a) Bring the capital of America and the inventive brain of the world together.

(b) Give all inventors full opportunity to show the public, the manufacturer, the merchant, the capitalist and financier, the possibilities for utility, business, trade and commerce that lies in their inventions.

Inventors whose devices may be adjudged to combine novelty and utility with commercial practicability will be awarded, by qualified board, cash prizes, gold, silver and bronze medals and certificates of merit.

The Exposition will be a veritable "Clearing House of Ideas," through which the man of originality and ideas is brought in personal contact with the man in need of ideas and with the man of money.

The Exposition of Inventions and Patents will be a place where anyone with an idea, formula, process, labor-saving plan, device, etc., improvement on machinery new invention, a developed and patented specialty, or anything saleable can exhibit. This will enable the manufacturer who is looking for some sort of device which will lessen the labor and cost of producing his wares, or assist in the economic production of his raw material or its procural, or help to secure the economic manufacture of such raw material, or the capitalist who is searching for some clever device or process in which he can see the possibility of increasing some of his idle money, to go and see what the man of ideas has to offer.

More About Ralph Estep

A hall in the School of Photography at Winona Lake, Ind., has been named in memory of Ralph Estep, who was killed in action near Sedan during the world war while engaged as front-line photographer. Mr. Estep was a correspondent photographer for Leslie's Magazine in the Balkans and France during 1915. He enlisted with the 36th Division in 1917, and later was made signal corps photographer, A. E. F., and assigned to front-line work. He is survived by his father, Exra Estep, Long Beach, Cal., and two brothers, A. L. Estep, a Spanish War veteran, Cicero, Ill., and Fred O. Estep, Rockford, Ill.

An Error

We regret, through an error, the report of Frederick & Nelson's Annual Exhibition of Pictorial Photography, held at Seattle, was announced in our December issue as the second exhibition; it should have read third and not second.

These photographic exhibitions have proved both successful and popular, and it is expected that there will be a still greater number of contestants next year. This last salon has shown an advance in the quality of work over the two previous exhibitions. We hope the good work will go on.

Hammer Dry Plate Company

We were pleased to have a visit from Mr. J. K. Rose, representative of the Hammer Dry Plate Company of St. Louis, about the first of the month. Mr. Rose is naturally a great believer in the glass plate negative; he contends it has distinct advantages.

Readers of this magazine will perhaps recall our interview with Mr. Rose, published in the July, 1921, issue, giving pointers on the making of dorotypes. Some advertisers, especially the railroads, have found dorotypes of large size most effective for pictures of scenery along their lines. The rich brown tones of these pictures on glass show to great advantage on the gold ground in which they are finished.

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CAMERA CRAFT

A Photographic Monthly

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CONTENTS FOR FEBRUARY 1923

"The World and All—Before Him" (Frontispiece)	By De Gaston	
Car Photography	By Edgar Felloes	53
Finding Forgery and Forgers by Photography	By Chauncey McGovern	57
East, West, Hame's Best (Illustration)	By A. E. Davies	63
The Graf Variable Lens	By C. A. Love	64
Kodak Enthusiast Finds Fame and Fortune	By O. H. Barnhill	66
Commercial Photography	By the Associate Editor	69
Bromoil and Bromoil Transfer	By Chris. J. Symes	72
California Street (Prize Picture)	By Gabriel Moulin	73
My Memory Kit (Poem)	By William Ludlum	77
Pictures for the Children	By Lee S. Seward, M. D.	80
Percy Neymann, Ph. D.	By Sigismund Blumann	83
Insulting Your Intelligence	By William P. Mattern	84
Photographers' Association of California		86
Art and the Crafts (Foreground Trees)	By H. D'Arcy Power	92
The Amateur and His Troubles		95
International Photographic Association		97
Our Book Shelves		98
Notes and Comment		99

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By DE GASTON
San Francisco

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D.. Editor-in-Chief

EDGAR FELLOES, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

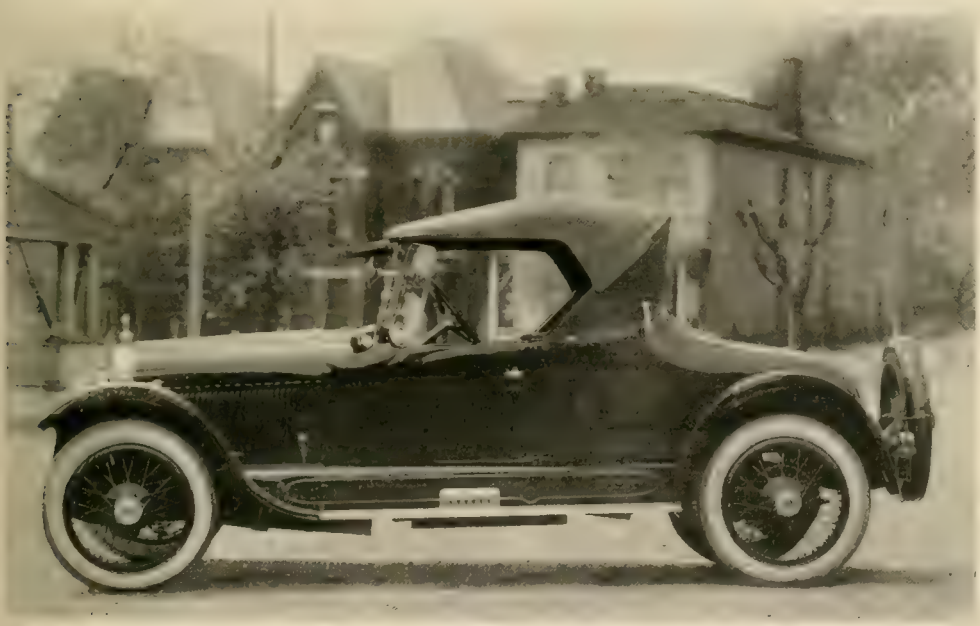
VOL. XXX FEBRUARY 1923 No. 2

Car Photography

By Edgar Felloes

With Illustrations by W. E. Dobbs, of the Buick Company

To us who live in San Francisco, it seemed a sizzling day when we left the comforting shade of the Auditorium building at Kansas City and exchanged it for a vacant cyndered lot adjoining. This place had been selected for a demonstration on car photography. There was an excellent attendance of commercial photographers in their shirt-sleeves from various parts of the country. Attired as they were, we never saw so many men



THE FRONT WHEELS ARE SLIGHTLY TURNED TOWARD CAMERA

who looked so like business; they were stripped for it. It was downright hot, and that part of California from whence we came seemed to us then a most wonderful place to live in, and we sighed: "Home was never like this!"

VIEWS OF THIS SORT MAKE A LONG FOCUS LENS IMPERATIVE

We were all there because Dobbs was there; we wished to see him work and hear what he had to say on the subject of photographing automobiles. Mr. W. E. Dobbs, of the Division of Photography, Buick Motor Company, Flint, Michigan, is a specialist in his line, he has for years photographed cars both inside and out, and we decided it was worth stewing and simmering to be in a condition to absorb some of his knowledge.

Mr. Dobbs explained, in photographing the side view of the car, place the camera opposite the center of the body, use a lens of long focus, and don't forget this—turn the front wheels slightly in your direction; the object for so doing is to show the wheels circular in the picture and not elliptical. This little kink is not generally thought of and we marked it down to profit.

The photograph of the car must be clean-cut. The picture has to show all points possible; the car must be the main object. The background should be taken care of in the focusing; by contrast it should show soft,

BUYERS LIKE TO SEE ALL VIEWS OF THE PROSPECTIVE CAR

must be harmonious, should support the car in the picture and not challenge it by strong contrasts. Figures if introduced should not detract attention from the car. A light should be chosen that will make the most of mechanical details. For the interior work of cars, a 1500-watt lamp with reflector is used, and by judiciously moving it about Mr. Dobbs secures the effect necessary for what it is desired to show. Use as long a focus lens as possible for this work. When photographing reflectors or such plated parts that are troublesome, the use of zinc ointment is advised, applied to such parts to deaden the glare.

Mr. Dobbs uses both plates and films, and he advises, expose for your shadows and develop for detail and a long scale of gradation.

The important question of lenses arose. Our demonstrator favored,

for an 11 x 14 negative, a Protar lens single combination of Series VII., No. 11, $39\frac{1}{4}$ inches focus. For an 8 x 10 plate, his choice is the doublet VIIa, No. 30, $23\frac{3}{8}$ inches focus.

FOR INTERIOR WORK, USE A LENS OF AS LONG FOCUS AS OCCASION WILL PERMIT

For color separation, the Panchromatic plate with K.3 filter is very desirable.

In printing, expose sufficiently long so that on full development the print is just dark enough to bring out its beauty.

With regard to soft focus pictures. These are pleasing pictorially, but salesmen's samples should show all detail clearly, and these should be mounted on white holland cloth. Photographs for other purposes are better mounted on very stiff card.

Note.—The pictures we have here reproduced were made from a Buick Special 54 Roadster.

Finding Forgery and Forgers by Photography

By Chauncey McGovern, Handwriting Expert, San Francisco, California

Written Expressly for Camera Craft*

Illustrated by the Author

Note.—Since the time Mr. Chauncey McGovern located in San Francisco, in 1912, whither he came as an official of the Philippine Government to the Panama-Pacific International Exposition, he has served as handwriting expert in practically every lawsuit (on the Pacific Slope) wherein questioned documents were involved and the importance merited newspaper mention. For the 10 years previous to coming to San Francisco Mr. McGovern was leading expert for the Government, in the Philippines, in practically every case wherein disputed documents figured at all prominently.

The every-day "commercial photographer" has all the equipment needed to (1) prove a forgery to be of the "traced" variety; to (2) prove if the forgery was done by a certain suspect or not; to (3) obtain convincing photographs of writing on a paper which cannot be seen by the naked eye, even with the aid of a powerful microscope—writing which has been "eradicated" by means of chemicals and written over with a different ink or pencil or typewriter; and to (4) secure readable photographic prints of inkless, pencil-less writing on a sheet of paper which was lying under a first sheet on which someone has done writing with either pen or pencil.

And if this "commercial photographer" will merely use such an outfit in the manner in which this sort of equipment is today being used by myself, he will be able to furnish attorneys or the courts with self-speaking pictures—evidence which cannot lie, which cannot make an error, which cannot be denied. If the man with the equipment happens to have years of training as a "handwriting expert," he will, of course, be in a position to PRESENT his photographic evidence to lawyers and courts with all the more effectiveness; yet the fact remains that no human being who testifies as a "handwriting expert" can make, with his own hands, on blackboard or on paper or on "tracing cloth," the strikingly effective, mechanically-produced pictures or illustrations produceable by the commercial photographer "who knows how."

After years of study, of observation, of experience as a professional "handwriting expert," I have cast aside all the old-fashioned methods described in the text books on forgery, and am today using photographic means, which are simpler, more rapid, more inexpensive, more certain, more understandable to average jurymen, in presenting certain sorts of "documentary evidence" to courts (and clients, who are frequently thus saved, in time, the expense of going to court).

And all of these methods are available to any commercial photographer

*Copyrighted 1922, by Chauncey McGovern.

with ordinary brains and with the desire to produce new and better results.

Here are a few instances:

(1) Making Convincing Photos of Writing Which Cannot Be Seen With the Eye—Not Even With a Powerful Microscope

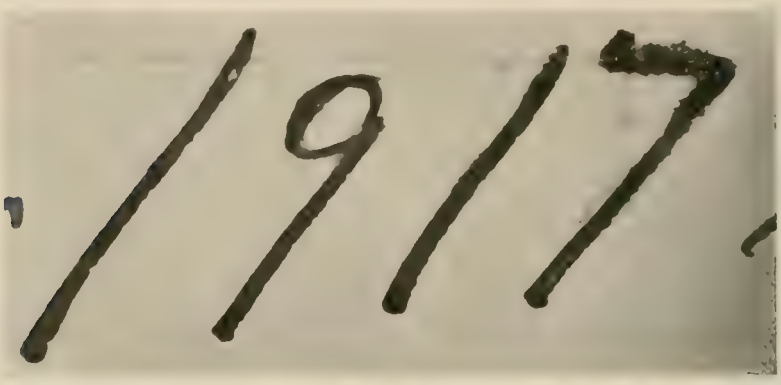


Photo by "Chauncey McGovern method" shows conclusively figures "1919"—invisible to the eye, even with powerful microscope—had been "eradicated," after which "1917" had been written by another person, in her holografic will. The changed figure "7" being bigger than original figure "9," the forger made new figures "191" also, bigger than the originals. Faint outlines of original smaller figures "191" can be seen plainly in the negative. (Attorney Louis Oneal.)

With the use of nothing more than a commonly-known photographic plate, an ordinary copying lens, an ordinary camera, I was recently enabled to prove conclusively that a typewritten "will" of a well-known San Franciscan was really a rank forgery. So positive was the proof that I had produced with these few items that the "will" was withdrawn immediately when I exhibited a single bromide enlargement of only one portion of the photographic plate. (Attorney Jordan & Brown.)

This was the situation before I made this small-size but enormously valuable photograph:

The surviving brother of a well-known man, recently deceased, sued the widow for the possession of a half-million dollar apartment house, of which the widow had taken possession at her husband's decease. The couple had lived there at the time of the husband's death, and the city register showed the property to be in the husband's name. The surviving brother, however, demanded possession on the ground that it was his own—that he had only made a "nominal" transfer of the apartment house to the deceased man's name a couple of years before the brother died, for legal and good reasons.

In support of the surviving brother's claims to ownership, he produced in court a statement, typewritten on the engraved letter paper of the dead man, and bearing the deceased's signature in ink, the statement being in the form of a letter to the contesting brother. As a final proof that this

satement (which was the equivalent of a "will") was genuine, the surviving brother exhibited the envelope, engraved with his brother's name and addressed to himself in the distant town in which he, the surviving brother, was living at the time the statement was dated. This envelope was regu-

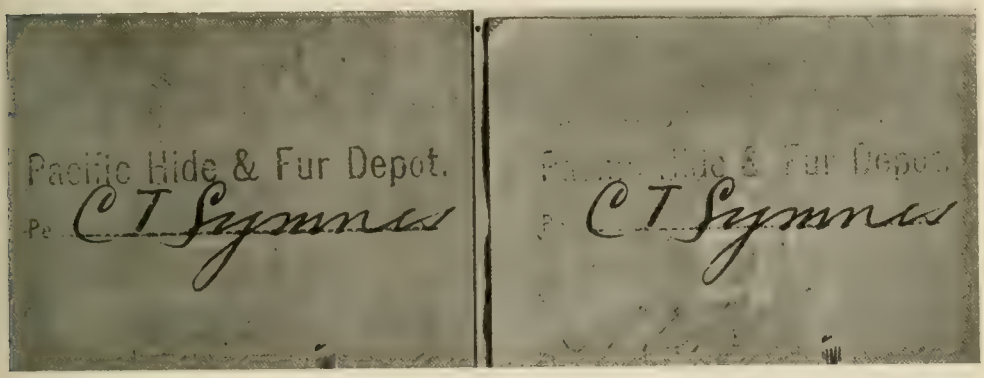


Photo by ordinary photography (orthonon with yellow screen) with photo by "Chauncey McGovern method." In first plate (ordinary method) nothing is seen of signature "H L Heilbron" under the "C T Symes" (forged), but in second plate (Chauncey McGovern method) the "eradicated" signature is seen sufficiently well to prove it had been there and "removed" by chemicals. (Attorney L. H. Brownstone.)

larly postmarked. There was no question that the pen-written signature of the dead man was genuine. Even the widow had to admit that it was signed by her late husband.

In a vague hope of "finding some way out," the widow brought the "will" to me for examination. . . . Being familiar with the ingenious schemes of bold forgers, in less than half an hour I was able to exhibit to the widow a photographic plate of the "will"—made in a way of my own—the plate showing plainly a number of words (or parts of words) written on the paper with pen and ink by the deceased husband.

Briefly, the surviving brother had gone through his desk a few weeks before the case was brought to court, had fished out a letter written actually with pen and ink by his brother on his engraved letter paper, and which had been actually mailed on the day it was postmarked—some years before. The scheming survivor had then secured a bottle of a commonly known "ink eradicator," washed off all the ink writing except the signature, and had then typed in a freshly-concocted "will," which, if genuine, would have taken ownership of the magnificent apartment house from the widow and turned it over to the brother.

But the handwriting expert knows that this "ink eradicator" does not really "eradicate" the writing from the paper—at least, not **all** of the writing. There still remains in the paper, "mordanted" into its fibres, a goodly portion of certain chemicals of the ink. The ink eradicator serves to "cover up" that remaining ink from sight so thoroughly that no human eye can

see the ink still in the paper. Not even with a powerful microscope can the remaining ink lines be seen. (See pages 27 and 28 of "Detecting Criminal Handwriting," by Chauncey McGovern.)

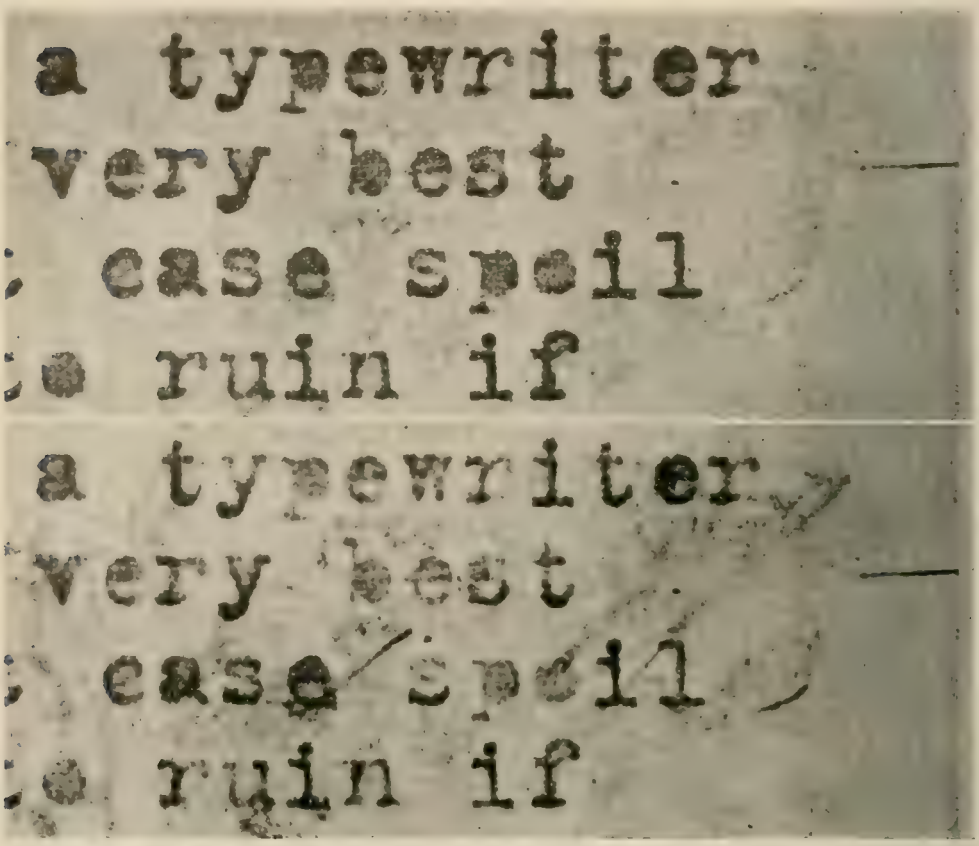


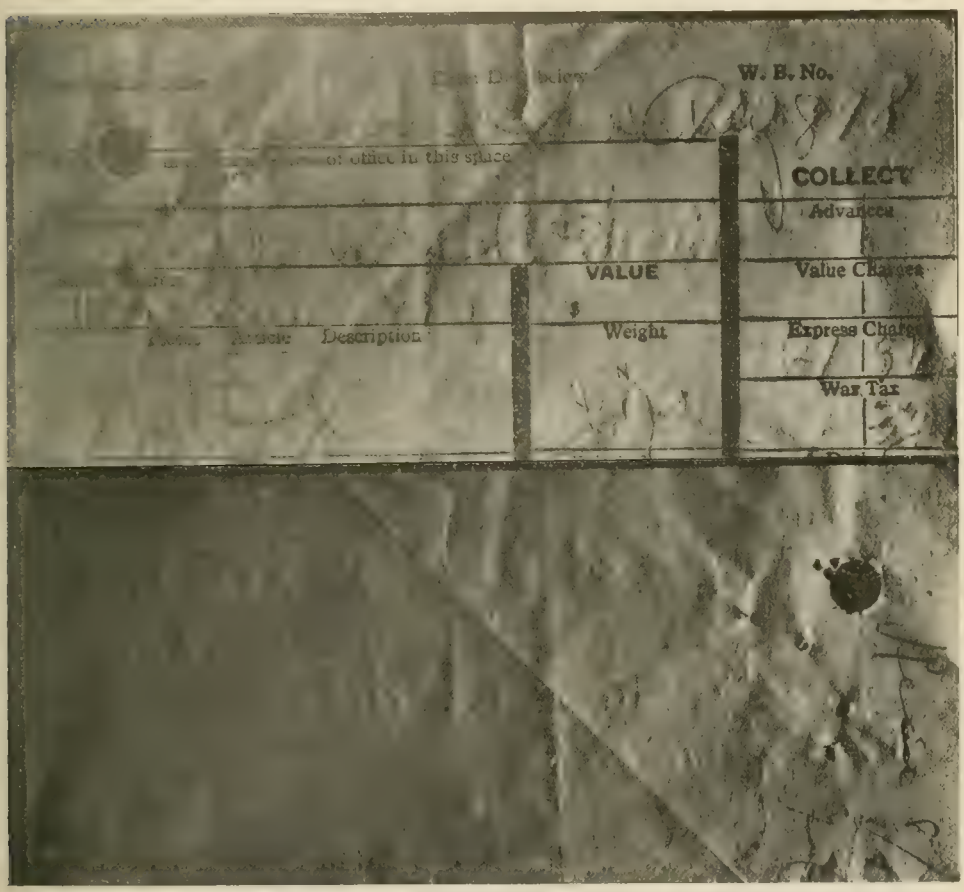
Photo of portion of typewritten will (a) by ordinary photography (commercial orthonon plate with yellow screen) and (b) "Chauncey McGovern method." The "eradicated" pen-writing is seen clearly enough to prove the "will" is fraudulent. A third plate (not here reproduced), made after "fuming" the will chemically, showed all the original writing perfectly readable. Part of the crossing of the "t" can be seen in upper plate. This because the forger failed to put so much acid here as elsewhere. (Attorneys Jordan & Brown.)

All handwriting experts know, too, that this writing may be restored to ordinary view by submitting the paper to a bath in the "fumes of ammonium sulphide" or certain other chemicals. But that "fuming" practically disfigures the document, and that such disfiguring is a criminal offence, except when done by the order of the court or owner of the document, who thus forfeits his privilege of using it as "conclusive legal evidence."

After much experimenting, however, I found that any commercial photographer can make a photo of such "eradicated" ink, without injuring

the document in any way or to any degree; in fact, he can reproduce the eradicated writing without actually touching the document itself.

The procedure is simple:



SECURING READABLE PHOTOS OF INDISTINCT PEN AND PENCIL IMPRESSIONS

Upper Section of halftone shows a contact print of a Process Film negative, made with slitted side light,—of the front side of a receipt, printed, and filled out in Pencil BY A FORGER. Showing impressions on the paper made by the person who wrote the receipt filled out just BEFORE the forged one, from the same numbered pad.

Lower section shows the reverse side of the same paper, photographed in same manner.

By holding lower print before a MAGNIFYING MIRROR, the IMPRESSIONS (on original contact print) were readily deciphered. The guilty person was caught through these photos. (Inspector E. W. Hogan.)

Place the document on a sheet of black paper between two sheets of glass in a printing frame.

Make an exposure, with arc lights to the right and left of the printing frame, using a process film. Bromide enlargements of about 25 to 50 diameters will show enough words or letters, or parts of letters, to enable

anyone with ordinary imagination to read beneath the typewriting the eradicated writing which had been done with a pen. , , ,

Having ascertained for a certainty that the original writing has been "eradicated," it is then an easy—and safe—matter to obtain permission from a court to "fume" the paper and to take a second photographic negative, using another process film, of the "restored" writing.

As the "restoration" of the writing means that the iron remaining "mordanted" in the ink marks turns yellow—and yellow makes a black impression on the photographic plate—there will follow in a contact print a distinctly clear outline of the ink mark which had been washed away by the ink eradicator.

Several recent "mysteries" of a similar character, solved by this procedure of mine, are illustrated in the attached half-tones.

(2) Securing Readable Photos of INDISTINCT Pen and Pencil IMPRESSIONS

If you have a sheet of paper on which appear indistinct impressions of a pen or pencil, used on another sheet which had been held superimposed on the sheet whereon the indistinct impressions—or indentations—appear, and you wish to be able to read the writing of which the impressions are but faint indications, you can do it effectively—and with a sort of magic-like effect on the non-technical person—by the use of the camera.

The procedure, difficult to discover, is really simple to follow, which is:

Place the sheet, with the impressions reverse side up, on a sheet of BLACK paper. Then put a piece of glass on both sides. These place in a printing-frame—the reverse side of the impressed sheet being then faced to the camera.

Using a Process FILM (not a PLATE), place a SINGLE LAMP to the LEFT (or right) of the printing-frame, first covering the whole face of the lamp with a thick black card, in the center of which you have cut a SLIT, very narrow, and about ¼ inch in length. Let the light, coming thru the slit, fall on the sheet from the left (or right) in a somewhat oblique parallel inclination (almost parallel to the face of the paper).

After developing the film, make a contact print WITH THE GLAZED SIDE of the negative next to the paper (or "reversed").

If the resulting print does not suffice, make a contact print in the usual way—with the emulsion side of the negative next to the paper. Then, holding the print on your chest, place a MAGNIFYING MIRROR facing the print. You will then be able to read the impressions quite clearly.

While it may sometimes be found practicable to merely photograph the obverse (the face side) of the sheet, with the slit (side) light and Process film as above, or even use a PLATE for such an exposure, it most frequently happens that the face of the sheet on which the indistinct impressions appear has, also, some pen—or pencil—writing in plain view thereon. The presence of this pen—or pencil—writing on the face that is photo-

Photo by A. E. Davies

EAST, WEST, HAMES BEST

graphed will make the reading of the mere indentations almost always impossible.

It is usually upon such tiny little details as the reading of inkless and pencil-less marks—details so apparently or seemingly inconsequential that the forger never THINKS of them—that the handwriting expert finally lands the culprit.

It is true that world-famous handwriting expert, David N. Carvalho, tells in his book, "Forty Centuries of Ink" (page 182), that such impressions may be read by subjugating the sheet to the "fumes of iodine." This fuming, however, is a delicate task for even the experienced handwriting expert, and it frequently has resulted in the paper being irretrievably damaged in the process. But the photographing is, of course, as SAFE as it is SURE and simple.

The Graf Variable Lens

By C. A. Love, Chairman Demonstration Committee,
California Camera Club

Note.—The California Camera Club tries to bring before its members anything which pertains to photography, and invites all manufacturers of cameras, paper, lenses, plates, films, etc., to participate at any time or send material for demonstrations.

When Mr. Edgar Felloes, associate editor of Camera Craft, returned from the Convention of the Photographers' Association of America, held at Kansas City last spring, with the first Graf Variable lens, 8½ to 9½ focal length for 4 x 5, manufactured by the Graf Optical Company of South Bend, Indiana, the writer immediately got in touch with him and obtained the loan of it for experimental purposes. I take pleasure in presenting at this time the results of this "Miracle" lens.

For the benefit of those who are not acquainted with this lens, I shall state that the Graf Variable is an anastigmat lens which contains two focusing scales—one for sharp image and the other for soft-focus effects. When the diffusion ring at the end of the barrel is fully extended, it operates at a speed of f 3.8, giving sharp results. For the softer effects the ring may be adjusted accordingly, the speed varying from f 4.5 and less at the different apertures. The focal length of the lens varies at each degree of diffusion, necessitating the refocusing of the image on the ground glass for each operation. The economy of the Variable is obvious, as the plates made with this instrument do not require the amount of retouching that many of those from other lenses do.

The illustrations in Home Portraiture were taken under the most trying conditions to determine whether there might be any flare or double lines when shooting directly against either artificial or day light. They show the wonderful, pleasing softness obtainable without retouching, even when operating at the greatest amount of sharpness, f 3.8, full aperture, or the different degrees of diffusion at f 4.5. In cut No. 1 the lens was at its greatest sharpness, f 3.8, while in No. 2 there is extreme diffusion. Both of these pictures were taken against the light at full opening, and the quality is very apparent in the soft as well as the sharp print.

After the experiments with that first lens were made, and as the Variables had undergone a tremendous improvement, the anastigmat end f 3.8 being perfected, I sent to the manufacturers for a lens suitable to cover a 5 x 7 plate focal length 11 to 12½, for demonstration purposes in our club studio. I chose that size as the most practical for use in the studio of the commercial photographer and the most convenient for the home portrait artist. As artificial light is used in most of the studies at the present time, our club had Miss Ida Krajewski, a professional operator, use the

HOME PORTRAIT WITH 4 x 5 LENS

Lens at F 3.8 Sharp — Lens at Full Diffusion, F 4.5

STUDIO PORTRAIT WITH 5 x 7 LENS

Lens at F 3.8 Sharp — Full Diffusion at F 4.5

Graf upon our studio camera. The cuts No. 3 and 4 show the results. The source of light was a 500-watt flood lighting Mazda lamp; the sitter had a dark red face, black hair, beard and hat, with noticeable lines on his face. It is very apparent that No. 3 was taken with the sharp lens at f 3.8, and No. 4 at f 4.5 was completely diffused.

When it came to our daylight demonstration on November 19th, Miss Krajewski again offered her services. Portraits were made demonstrating the lens' ability to deliniate from sharp focus to various degrees of diffusion. The professionals who attended were much impressed with the quality from a subjct who had many character lines, as well as a scarcity of hair, and a skin that reflected light. With such disadvantages, the lens responded nobly in the tests, and to the satisfaction of all present.

Kodak Enthusiast Finds Fame and Fortune

By O. H. Barnhill, Los Angeles

With an Illustration by the Author

Harold McCurry's father viewed with alarm his son's growing fondness for photography. The youthful Kodak "fiend" was becoming so engrossed in the art preservative that there was more than a possibility of his wanting to make it a life profession. Such a course was anathema to the proud father, who held the high and honorable position of Doctor of Dentistry in a California county-seat town.

"Photographers have no standing in the community," the elder McCurry told his son. "They are regarded as little better than window washers and scissors sharpeners."

Heeding the paternal warning, Harold dutifully followed in his father's dentistic footsteps for two or three years, pulling and patching teeth. But the fascination of photography continued to exert a powerful influence over the youthful McCurry, causing him finally to break away from the torture chair and get into the picture game in San Francisco.

A typical outdoor man, Harold soon wearied of being cooped up in a stuffy studio. Making maps of people's faces was not exactly his idea of an ideal existence. What appealed to him most was action, people doing things, progress and development in God's great out-of-doors.

Going to Sacramento, the ambitious young dry-plate artist purchased the photographic end of an engraving business. His success soon aroused the jealousy of his partners, who froze him out, saddled with a $1160 debt. McCurry laid his case before Fred Keisel, a prominent Sacramento banker, who, after investigating the situation, announced:

"Mack, your assets aren't worth a damn, but your credit is as good as gold. I'll loan you the money to pay off that debt."

McCURRY'S AUTOPOD

Invented by Mr. McCurry, and after four years of use has proved itself invaluable—a real time-saver

The Autopod is bolted to the car as shown. When not in use it is quickly removed and packed on the running board. Nothing has proved so handy in overcoming obstructions such as walls, hedges and fences, and viewing over the heads of crowds.

McCurry started in business for himself, and was so successful that he rented a large building and sublet part of it to several tenants, some of whom went broke, leaving the aspiring artist in the hole for a big bunch of money. In order to pay off a fast-ripening note of $3700, he did his own janitor work and slept under the counter, after taking pictures all day and laboring half the night developing and printing them.

Moving to less commodious quarters, the struggling commercial photographer's business grew like the proverbial green bay tree. His pictures and methods found favor with individuals, organizations and officials. Everybody rejoiced at his success, except the former envious partner, who felt so bad about it and the way he had treated McCurry that he went off and killed himself.

Within a dozen years McCurry's annual business grew from $400 to $14,000. Although aided by several assistants, he was simply snowed under with work a good share of the time, laboring from early morn till dewy eve to preserve in pictured form the many interesting phases of California life.

What about his standing in the community? Have his father's fears been justified? For years McCurry has been at the head of the home products division of the Sacramento chamber of commerce, whose business it is to see that Golden State goods are not ousted by out-

side competition. The American Photographers' Association placed him in charge of the Pacific States for the commercial photographers' division of that organization, while Governor Stephens made him a director of the State Hospital at Yuba City. A year ago President Harding appointed McCurry postmaster of Sacramento, the capital city of California, a position which he is filling with great satisfaction to both patrons and employees. He still retains his photographic business, although the work is now all performed by others.

Why are McCurry and his pictures so popular? A good answer to the latter part of this question is afforded by two sets of photographs recently made for the commissioners of a California county. One collection was made under the direction of officials, the other according to the artist's own ideas. The former showed conventional groups of people lined up to have their "pitchers took; big, bare buildings; plain, flat fields and roadways; haphazard herds of livestock, and other things of like nature.

The second bunch of photos were not only artistic in composition but full of life, action and achievement. People, animals and machinery were shown at work under actual conditions, with the product of their labor exhibited to the best possible advantage. Livestock was pictured in such a way as to bring out all the fine points of the various breeds, while crops were made to look as big and good as possible.

"Play the game square," is McCurry's motto. Never has he used an official position as a lever to pull business his way. He performs community service because he is a public-spirited citizen, not because it is good business policy.

Harold McCurry is a big, breezy Westerner—a fine, fat fellow, who would just love to take things easy and have a good time, but who has never done so and never will, because he cares even more for work and achievement.

Commercial Photography

By the Associate Editor

With An Illustration by Lothers and Young

Commercial photography has become of vast importance in recent years, and it has proved itself invaluable in practically every line of trade and many professions. It is not surprising, then, that commercial photography as it is followed in the larger cities becomes to some extent a specialized occupation, the workers displaying a wonderful proficiency on account of their particular bent.

There is profit in the study of this modern phase of photographic work. It is interesting to follow the efforts of those who produce pictures to meet the requirements of advertiser and printer alike. These pictures must tell a story, must leave an impression or the advertisement passes unnoticed. This field of endeavor calls for ingenuity and real creative spirit on the part of the photographer, and because of this his output is one of the useful arts, entitled to serious consideration.

We have recently given attention, in this magazine, to what the workers are doing in the East, and it is only natural we should be interested in progress at home. As we are fond of studio life, we recently had occasion to visit the workrooms of Lothers and Young, commercial photographers. These men have a future, they have ideals, and they work, and we think some of our amateur friends will be interested in a short account of how they do it.

Lothers & Young specialize on the advertising picture, the story-telling picture of human appeal. They do not satisfy themselves with single-figure compositions only, but when occasion demands they do not hesitate to avail themselves of the use of several models to lend dramatic interest to their compositions. This is probably the most difficult thing in photography, to get your models to work together, to bring them up to the "scratch" for the supreme moment—the exposure. We were struck, in looking over several pictures, on the choice of models used; they showed a very carful selection, especially so as regards types, and this calls for an extensive acquaintance among people. It was explained to us by Mr. Young that the firm keeps a directory much as the movie men do. We can well believe it, or it would be difficult to meet their various requirements. Both professionals and amateurs are used to meet this demand, and it struck us that good-looking young ladies, "not made of wood," appear to have the most frequent call.

Mr. Young is an enthusiast, a stickler for the correct. Everything must be correct—furniture, costumes, properties generally. The furniture is not the stuff we were once familiar with in the old-time photo galleries; it is

A WELL-HANDLED EXAMPLE OF LIGHTING

the genuine article, and we were assured that at times the renting of these things often costs more than the average person would guess at. Some of these accessories are valuable.

All the pictures in the studio are made by artificial light, usually on 8 x 10 cut films, and these are often enlarged. On account of cost, it is absolutely necessary to plan in a systematic way before the photographic work is started. For this purpose pencil sketches are submitted to the customer, and all necessary corrections and changes are made at this time.

Among the many pictures we saw, we selected the one here reproduced, and we asked Mr. Young to tell us his aims when he undertook this subject. The following is what we received, and we gladly publish it, as it is of a practical nature.

One of our clients, the Tin Hoeng Company, manufacturers of the Oriental toilet requisites, namely, Canton Fleur perfume, powder, rouge, hair ointment, etc., came to us and asked that we illustrate a series of advertisements for them, photographically, showing the subtle charm and added Oriental atmosphere of their products, to make an appeal to the discriminating tastes of the feminine world of today. Now, to combine the Orient of two thousand years ago and the modern woman seemed to afford an opportunity full of color and imagination, and we immediately realized that to do this we had to make use of that great force HUMAN INTEREST, and apply it consistently.

Our first step was to select the proper subject and sets. We chose a model suggestive of feminine charm and daintiness, and then create around her a setting suitable to a young woman of taste and refinement, inasmuch as these Tin Hoeng products make their appeal to this type. Our period furniture, silver appointments and costume carried out our idea for the proper background. So much for that. Now to bring in the Oriental touch without being bizarre. We chose one of our pretty Oriental models, dressed in her native festive garb; but that was not enough. We had to do something which would suggest subtlety, the mystery of the Orient. Here the ingeniousness and artistry of the photographer had to come to the fore. The proper use of light was to put our idea over, and it must be remembered that in all art, light and shade are two of the most important elements; the use of these two elements either makes or mars a picture. Too much stress cannot be laid on this fact. With the lights, one figure is brought into the foreground, while the other fades into the background. The background has no definite outline, just a suggestion by light and dark of the dim past, from which the perfume is brought by Oriental hands to meet modern needs and present-day refinement. Copy alone could not achieve this; it must be done by suggestion.

The Chinese maiden hints all that is Oriental, and she whispers the secrets and charms of its products to the lady in her boudoir. With all the ATMOSPHERE and HUMAN INTEREST, notice that the product itself is brought out, accentuated by highlight. The photographer today who goes in for illustrating cannot stop at photography alone; he must understand his color values in monotone, composition, and last, but not least, he must have IMAGINATION.

A friend is one who knows all about you and loves you just the same. —Anon.

Do not isolate yourself. Be among men, and among troubles, and among things, and difficulties and obstacles.—Henry Drummond.

Bromoil and Bromoil Transfer

By Chris. J. Symes

Photo-pictorialists who are interested in Bromoil and Transfers will find the following from our contemporary, "The British Journal of Photography," of great value. Mr. Chris J. Symes, the author, has treated his subject in an illuminating way which cannot fail to be helpful.

Bromoil and Bromoil transfer are most fascinating processes, and year after year the numbers of advanced workers who take up one or the other increases, but many of them give it up on account of the lack of reliable and up-to-date information, and the numerous difficulties they encounter. It is seldom, indeed, that their special trouble is referred to in textbooks, and real experts are few and far between; so there is no one within reach to put them right or even to suggest methods of tracing the fault. Many of the processes advocated from time to time are unnecessarily complicated, so that a simple and reliable way of working will be a boon to those workers who want to have absolute control.

No other process in photography gives the same quality as Bromoil or Bromoil transfer, and with the exception of bromide (with which control is very limited) they have no serious rival for exhibition work. The results are permanent, consisting only of pigment on gelatine or paper.

Most photographers have some idea of the method employed, but for those who may not have heard anything of the processes, it may be explained that a bromide print is bleached in such a manner that the gelatine of the emulsion will attract an oily pigment in such proportion as the light has acted, the pigment forming the image on the gelatine. A transfer is the pigment image of the Bromoil transferred by pressure between rollers to another piece of paper.

To begin, the character of the negative has an important bearing on the print. It should be fully exposed and lightly developed. There should be plenty of detail in the shadows, but no great density anywhere. As an example, where the average exposure indicated by a meter is about a 75th to 100th it is advisable to give about a 25th, and develop with a weak developer, say half the normal strength, for the usual time for full strength which with most plates of average speed will be about 2/4 minutes according to the developer used. The negative should be very slightly thinner than one which is intended for bromide enlarging simply. The bromide print may be made by contact or enlargement, although in the former case the negative should be very much stronger than indicated above, but as the majority of people now use small plates and enlarge them subsequently, perhaps it would be better to assume that an enlargement is generally used for Bromoil.

The first thing to consider is the make of paper. Since the war, manufacturers, as a whole, have had some difficulty in obtaining gelatine

(Continued on Page 74)

California Street, Looking East from Stockton Street, San Francisco
Photographed by Gabriel Moulin

The above is a reproduction of the winning picture at the last competition of the commercial photographers of this city. The same subject was treated by all competitors, and it was interesting to note the different lightings and angles of view shown in the various pictures.

Nothing could be fairer than the way these competitive pictures are judged. The prints have no distinguishing marks; they are hung up and voted upon, and the photograph securing the most votes wins.

Mr. Moulin, besides receiving the prize—a fountain pen—was also the recipient of much badinage; this was his second "offence." He already had won a pair of cuff links a few months previously.

To supply the funds for the monthly prize, the members chip in fifty cents each, and any member failing to submit a picture is fined one dollar; this, too, is added to the prize fund. This is the means adopted by the members to add a little "kick" to their suppers, and the writer would be sorry to miss any of these gatherings, as we all become boys again.—E. F.

for their emulsions of pre-war quality, and very few of present-day papers are really suitable for this process. A number of makers supply special Bromoil papers, and whilst most of these are suitable for Bromoil, in a very few cases, indeed, are these papers also suitable for transfer. Among the papers which I have tried and found suitable are:—

Kodak "Royal"	(White and toned).
Kodak Velvet.	
"Vitegas"	(Specially prepared for Bromoil).
Barnet	(Cream crayon natural surface).
Barnet	(Smooth and rough ordinary).
Barnet	(Tiger tongue).
Barnet	(Semi-matt Card).

Of these, "Royal" is suitable for Bromoil and transfer, "Vitegas" and Barnet "Cream Crayon," "Rough Ordinary," and "Tiger Tongue" for Bromoil only, and Kodak "Velvet" and Barnet "Semi-matt Card" and "Smooth Ordinary" for transfer only.

The type of print to aim for is one with a distinct but slight deposit in the highest lights and no aboslute black in the deepest shadows—in short, a print that is rather on the flat side. At the same time, development must be full, and carried as far as possible. At a temperature of 65 deg., the prints should be in any ordinary M.Q. developer for 4 minutes, and in cold weather the time should be extended until one is absolutely sure that development is complete. That is to say, the minimum correct exposure must be accompanied by the maximum development.

Any ordinary developer will do. I think (and most Bromoil workers with whom I have been in touch agree with me) that the developing agents have only a slight if any bearing on the final result. My usual developer is M.Q. which differs very slightly from the Kodak formula, and I have also used Amidol. There has never been any noticeable difference in the behavior of the prints during subsequent operations, which could be due to the developer.

The prints should then be fixed in a plain hypo solution—3 ozs. of hypo to 20 of water, fixation must be complete, and to insure this it is advisable to leave the prints for at least 15 minutes in the solution if thin paper, or 20 minutes if thick paper is used. On no account should acid hypo be used, as in nine cases out of ten, the print fixed in this solution will refuse to bleach. The print should then be very thoroughly washed—two or three hours are essential, for, if there is the slightest trace of hypo in the emulsion during the bleaching operation, trouble will ensue.

The reason why a thin negative is so advisable is obvious from the foregoing, because with a negative that is at all fully developed it will be impossible to get a bromide print of the character described above. At this point I would advise prospective "Bromoilers" to leave a blank margin of about half an inch all round the print, so as to safeguard the brush from moisture during inking.

The next operation is bleaching, the most important operation in

the process. This may be proceeded with immediately washing is finished, or, preferably, in my opinion, the print may be dried and bleaching and the subsequent operations done afterwards. So far as I can see, there is no reason why a print should work better after being thoroughly dried except that the gelatine hardens a little on account of the drying, but it always seems to ink up easier after drying than if one proceeds directly after washing.

There are innumerable bleaching formulæ; I have tried many of them, and after a considerable number of experiments with several, evolved the following and find that is the best in my hands for all-round use. It consists of two solutions as follows:—

A.	Copper chloride	160 grs.
	Sodium chloride	2 ozs. 292 grs.
	Hydrochloric acid	3 minims
	Water	10 ozs.
B.	Potassium bichromate	55 grs.
	Water	10 ozs.

For use take 1 oz. of A, 1 oz. of B, and 2 ozs. of water.

It is rather important that the purest ingredients obtainable should be used, that the amounts as given should be exact, and that large amounts as given should not be made up, as the B solution does not keep very well. The copper chloride in solid form is very deliquescent, that is, it absorbs water from the air readily and consequently should be kept in a well-stoppered bottle. Solutions A and B should not be mixed until immediately before they are required. The potassium-bichromate solution is inclined to become stale after three weeks, so, unless one is constantly using these solutions, it is better that this should be made up in small quantities as required. Solution A keeps for any length of time. Any excess of undissolved sodium chloride (common salt) should be allowed to settle on the bottom of the bottle.

It is most important that all dishes and utensils used in this process should be absolutely chemically clean, and for bleaching especially a dish should be set aside for this purpose and no other. Before bleaching the dry bromide print, it should be placed to soak for 5 minutes in water at a temperature of about 65 deg., or until limp. Not only does this help the bleacher to flow evenly over the print, but it renders the surface of the emulsion into such a condition that the ink is more readily removed if desired than if the dry print had the bleacher poured directly over it.

The damp print is now drained of surface moisture and placed in a dish, and the ready-mixed bleacher is poured on in an even sweep. Eight ozs. will bleach four 15 x 12 prints, and it is not advisable to try more. In about half a minute the effects of the bleacher will begin to be visible, and in about 3 to 3½ minutes nothing but a faint brownish image will remain. The print should be left in the bleacher for a quarter of a minute after the last vestige of black has disappeared from the print. The time of bleaching gives an important indication as to whether subsequent operations are

likely to be successful. If it takes more than 3½ minutes or at most 4½ at 60-65 deg., either the print has not been thoroughly washed or the bleacher has not been mixed in the proper proportions. If it takes less than 2½ minutes, it shows that the print has been under-developed and a flat and muddy Bromoil is likely to be the result. Prints should then be washed in running water until the yellow stain has gone. This usually takes about 15 minutes. The print should then be fixed in a solution of hypo of the strength of about 2 ozs. of hypo to 20 of water for five minutes. The temperature of both bleaching and fixing solution should never exceed 65 deg. F. In the fixing bath the print changes from a faint brown to a very faint greenish grey.

After fixing the print should be washed in running water; if for Bromoil for at least half an hour; if for transfer 15 minutes is enough.

Then the print is put to soak in plain water at a temperature which varies according to the make. During this operation the gelatine absorbs water in the opposite direction and in proportion to the action of the bleacher, i. e., in the high lights the maximum is absorbed, in the half-tones about half, and in the darks little or none at all, and as the oily ink employed is repelled by water, it is only accepted by the emulsion in the same degree as the gelatine is tanned or hardened by the bleaching solution.

The temperature at which the prints should be soaked varies according to the make of paper; some are ready for inking directly after washing; others require an initial temperature of as much as 90 deg. F., while the average is from 70-80 deg. F.

The temperature should not be maintained throughout the period of soaking; the water should be at the point indicated by experience as the best for the paper when the print is put in and allowed to cool to the level of the temperature of the room, very little water being absorbed by the gelatine at a normal temperature by those papers which require heat.

The time of soaking also varies and must be found by experiment. As a general rule from 15 to 45 minutes is sufficient. If a number of prints are being treated they may, when soaking is complete, be transferred to cold water in which they will maintain their condition for a few hours. As a guide, the temperature and time of soaking usually required by the papers above-mentioned are as follows:—

Kosmos "Vitegas" for Bromoil	60 deg.	—ready after washing.
Kodak "Royal"	75 deg.	—20 minutes
" "Velvet"	75 deg.	—25 "
Barnet (thin)	70 deg.	—20 "
(All grades mentioned above) (card)	75 deg.	—30 "

Some workers prefer to dry their prints after washing, and in the case of papers with a soft emulsion, such as "Vitegas," it may be an advantage. Personally, I think it better to go straight through, but it should be remembered that each wetting and drying hardens the emulsion a little, so that longer soaking and higher temperature are required to bring the paper to the right condition.

(Continued on Page 78

My Memory Kit

(An Appreciation)

My memory is a fickle thing
That often leaves me where,
'Twixt "negative" and "positive,"
I'm stranded in the air.
Just when I think I've captured it,
It turns aside to stray,
And I must flounder through the mists
That rise to cloud my way.

If it were like some bashful bird,
I'd quickly call a halt,
By sprinkling its elusive tail
With sundry grains of "salt";
But as its "flitting" ways are not
So easily controlled,
Some surer means must be attained
To fix and firmly hold.

And so, where'er I go, I take
A magic memory box,
That picturizes all I view
And then, at will, unlocks
The portals of the past to me,
Recalling every grace
Of everything that I have seen,
In every sort of place.

Some simple-minded folks may claim,
A "camera" I describe,
And I'll admit, in many ways,
The "title" fits the "tribe";
But those who really understand
Will readily admit—
That of all names so far devised,
The best is—"Memory Kit."

—William Ludlum.

Money never made a man happy yet, nor will it. There is nothing in its nature to produce happiness. The more a man has the more he wants. Instead of its filling a vacuum, it makes one. If it satisfies one want, it doubles and trebles that want another way. That was a true proverb of the wise man, rely upon it: "Better is little with the fear of the Lord, than great treasure and trouble therewith."—Franklin.

At this stage, if the surface moisture be blotted off, the image may be seen in slight relief, the amount of which is some guide as to whether the print is ready for inking; with most papers the relief is distinctly perceptible, with others it is pronounced, and some do not show it at all. One soon acquires sufficient knowledge to judge, however, if the soaking has been accurate, though it should be mentioned that usually the absence of relief indicates insufficient soaking and too violent a relief the reverse.

Another pointer is given by the feel of the paper in the water; the high-lights are slippery and soapy, and the shadows rough to the touch when the print is ready.

Neither of the above are really reliable indications, for different batches of the same paper vary in both feel and amount of relief. The only real proof is the manner in which the ink takes during the next operation.

Before describing the porcess of inking it would be advisable to discuss the materials necessary, which comprise ink, brushes, plate-glass, petrol, cotton wool, palette knife, and a supply of blotting paper.

Inks.—These are made specially for the process by Sinclair's and Griffin's, both of London, and Horsell's, of Leeds. Some lithographic inks are suitable, but it is so much trouble to find them out and try them that it is far better to leave them alone and stick to those specially manufactured. These are excellent, of fine grain, and of the right consistency to start. Mediums are also made by the above firms, and each should be used with their makers' inks, or megilp may be used with any. A start may be made with, say, "Encre Machine" (a hard black), Burnt Umber, or a softer black such as "Encre Taille Douce," and such colors as the worker fancies. Colors used by themselves are seldom satisfactory; they require a proportion of black to give them strength.

Brushes.—Without exception, nothing but those made for the process are any good. The best are those made of genuine pole-cat hair, but they are very expensive and nearly impossible to procure. (I was recently quoted 65s. for a No. 28!) Those obtainable from Sinclair's and Griffin's are very reliable and not so very expensive. For a beginner, a large brush (24 or 28) and two small ones are necessary (say Nos. 14 and 10), and these may be added to from time to time.

Plate-glass.—A piece of plate-glass is about the best thing to place the print on for inking. It should be a good bit larger than the largest size worked. Three-ply wood is a fair substitute if covered with wet blotting paper, but nothing is quite so good as glass. Another piece of glass is required for a palette, on which the ink is spread with a

Palette Knife.—This should be a stiff one with a rounded narrow point—an ordinary table knife will serve.

Petrol.—Is required for cleaning brushes, palette, and sometimes prints.

Cotton Wool.—Is used for swabbing the surface of the print before inking, and comes in very handily on numerous occasions.

Blotting Paper.—May be photographic or ordinary—fluffless is best.

Inking is the next process, and provided everything has been correctly done up to this point, should present no difficulty. First of all, squeeze a little ink (the hardest you have) about the size of a pea, on the palette knife and spread it as thinly as possible on the glass you are using as a palette. Then take the soaked print from the dish and place it on the plate glass provided for this purpose. While still wet, swab it firmly and evenly all over with a wad of cotton wool, taking care that no grit or foreign body is on the surface; lay a piece of blotting paper over the print and squeegee lightly until all surface moisture is removed. Wipe away all moisture from the glass around the print, in order to avoid getting moisture on the brush, for, if this happens, not only will the ink refuse to take from the wet brush, but it will also remove the ink already deposited in spots. Take the largest brush and dab it lightly in the ink on the palette, holding the brush vertically and at about 2 inches from the top. Then tap the brush on the plain glass of the palette two or three times to even the distribution of the ink on the brush, and dab it lightly on the print, putting a slight pressure on the brush just as it touches the print. At no period should there be very much ink on the brush—it should only be on the very tips of the hairs. This dabbing motion, which I can only compare to the way an impatient man taps a pencil on his desk, should be continued till the ink has taken evenly all over the print and attains the depth desired. Practice soon makes the action automatic.

The chief point to remember is that it should always be gentle and as rapid as possible. The pressure that I mentioned should take place as the brush touches the print, should be the merest emphasis, and the dome shape of the brush will turn this into a dragging motion which deposits the ink. There should always be some ink on the brush except in the final stages, when it is sometimes desirable to go over the print with a clear brush to even up the result. If it is desired to remove ink, this is easily done by reversing the motion and making the emphasis of the stroke on the upward movement of the brush. This also tends to heighten the contrast.

As a rule it will be found that the hardest ink will take quite well, but occasionally it may be necessary to thin the ink a little; a small quantity of medium should be taken on the palette knife and thoroughly worked into the ink. It should be let down little by little till it will just take easily and no more. With some papers there is sometimes a little initial difficulty which goes with working, and before diluting the ink one should be quite sure that this is not the case. It is better, however, to use as hard an ink as possible, as the result is seldom clean when the ink has been softened at all, and medium should only be used when the print refuses to ink, unless, of course, it is desired to subdue insistent high lights, spots, and suchlike local alterations.

(To be concluded in March issue)

Pictures for the Children

By Lee S. Seward, M. D.,
Ahwahnee, California

With Illustrations by the Author

Note.—To most children and to a great number of grown people animals have a strong appeal. The dog, perhaps, heads the list as man's companion, and his long association with man has developed his intelligence to a remarkable degree—so much so that many dog lovers are inclined to credit some of the species with something akin to reason. There are no end of recorded instances where a dog's affection is so marked as to challenge human devotion. It is natural, then, there should be a feeling of sympathy between animal and owner.

We recently received from one of our readers a picture of a dog and his little goat friend, which we here reproduce; there seems to be an understanding between them. This picture struck us as being just the thing for the children, to be found in many homes in which Camera Craft enters, and we wrote to its maker for more. In due time we received portraits of puppies. Here they are, printed especially for the Little-ones; also, here are some notes of a technical nature intended for the Big-ones.

"I'M A GOOD KID NOW!

My picture of the setter dog and goat was made with my Graflex 3a camera and Tessar lens, Series II., F 4.5, working at its widest opening. I do not recall the light conditions of the day I took it, but I do remember

"OUR MAMMA THINKS WE'RE LOVELY; WHAT DOES YOUR MAMMA THINK OF YOU?"

that it was exposed 1-100th of a second and I think it was taken about 9 o'clock in the morning.

I spend most of my films on animal pictures probably because I have so many animals and find them so very entertaining. Their restlessness adds a certain sportsman element to such photography, but, on the other hand, English setters are contemplative even as youngsters, and can be "shot" more easily than the terrier types. I am enclosing these few prints I made of the last litter when they were but seven weeks old. The middle

"WHEN DO WE PLAY?

puppy of the three is "Arden," whose picture with the goat interested you. These were all taken in my covered patio. They will emphasize my amateurishness by showing so many amputated legs, but you may be interested to see how thoughtful little puppies can be.

I have very little time to give to photography, and do my developing in Buck's X-ray developer in my X-ray dark room. I have wanted to make different prints of these puppy pictures, when I could try to make less evident these amputations, but I can't seem to find the time.

"EXCUSE ME SITTING DOWN; MY LEGS ARE WABBLY

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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Requiescat in Pace

Percy Neymann, Ph. D.

On January 11th, just at 11.15, this gentle soul left a body wracked with pain and found a worthier home. The sun that had served to gladden our dear friend in his days of picture-making was shining brightly and shone again as his mortal remains were taken to the place of cremation. His wishes were carried out to the letter.

Those who knew Dr. Neymann best know the world has lost a good man, who, without creed or profession of belief, practised Christianity as He who died for it taught it. Dr. Neymann knew no need of his own that took precedence over the demands of the needy. He gave when giving entailed sacrifice and worry. He stinted himself, but he gave. With every beneficence went a sympathy and a whole-heartedness that was above this earth. With the highest attainments in learning and culture he was simple and unassuming in ways. His modesty was inherent.

Right or wrong, he was ever sincere, and those who differed from him loved him none the less. Upon his casket lay the roses of Divine Grace, and though, by himself so ordered, only four friends attended his funeral, a multitude of heavy hearts and a reverence most general marked the time. The great dome of heaven and the four walls of the horizon are to be his mausoleum. God made this to be so for such as our friend and man could devise none as fitting.—S. B.

Insulting Your Intelligence

By William P. Mattern

Lancaster, Penn.

Being an intelligent fellow like you are, (ladies to one side!), you would think that to own a good camera, and to know how to use it, would satisfy most amateurs—that they would concentrate and try to get all the pleasure from their hobby that they can. Isn't it queer that they aren't—and they don't? I knew you would agree!

Amateurs from Bawhston to San Francisco are all the same, aren't they? None of them see enough in their own city to photograph—all of them are longing to be let loose. some day, with a camera and a gross of films in a strange town.

The enthusiast in the East, being "fed-up" on Los Angeles, San Francisco and Scandal-er, that is—Hollywood, want to visit them and bring back silver memories of the trip. (What good would the trip be, if they couldn't prove that they were there?) Those in the West wonder what there would be to photograph in Boston—in fact, Boston would be a good place to keep away from at the present time. The people up there are decidedly more high-browish than ever since someone discovered that the center of gravitation is located exactly three thousand miles underneath the State House. Most people prefer Gotham, (ahem), Phila., or Washington. The second, however, is open to argument—and personally, I would advise those who are determined upon a trip there, that a rapid rectilinear as lens equipment will be sufficient—plenty—and so on through the synonyms! Chicago cannot be ignored but as the people are too chesty to find the "finder" on their camera, while resting it against their belt, it goes without argument that enthusiasts are scarce. Give your friend from Chicago a history of said city—a cozy corner—and watch him forget the rest of the party. Also, it will keep him quiet!

Different persons prefer different places; but dont' you think the idea of being dissatisfied with present opportunities is silly?

It seems the principle reason for discontent with our surroundings is —Underwood & Underwood. To believe everything that semi-artistic—and a few artistic pictures—explain of distant places, cause us to remark that some people wear their chin, (or chins) under wood, very much so!

Each American city somewhat resembles our own. Each has its public buildings and each its municipal ash-pile.

Washington, often called "The City Beautiful," looks it from the Monument. On solid ground you have to step some to get to the beauty-spots! Pennsylvania Avenue is the home of an awful crowd of those laundry people—but the collars of our representatives must be cleaned!

That much applies to most of them—they're all beautiful, if you are up high enough—and going fast!

Get acquainted with your own city is the subject for today's sermon. It has been touched on before and will probably be touched on again. Would the editor give articles space that are useless in instructive value? Think it over if you are contemplating such a trip—and have not got the money. If you have the money, think it "ovah," but you'll do as you please anyway.

You dont' have to have an album full of chunks of architecture that interest you only—and which you alone can enjoy because they remind you of a trip or a "rubber-neck wagon" excursion. Get an album full of pictures that everyone can snicker over—full of kids, animals, plants, funny-happenings, etc., then, if your friends recognize something with which they are familiar, they will applaud your skill and put you to the happy (?) expense of printing a few for them. If you can make a picture that will interest them to the extent that they will "swipe" it—then, in my opinion, at least, you are SOME photographer.

If you are a married man you are not altogether unfortunate, bad as things may look; for when the kid falls in the coal bucket you have an opportunity that Daguerre would jump over the gates of Heaven to grasp, even if he knew beforehand that he'd never get back!

Don't be afraid to take a picture of the baby because he has a dirty face and one of his stockings is down. Rather than send off for a sample of Fel's Naptha, (advertisers, inquire rates of business manager), if you haven't any soap—snap him the way he is, while he is in that humorous position.

When he causes you to walk the floor at night and, (horrible thought), you hesitate near an open window, ignore that ignoble impulse, (there may be someone passing below), and take a flash-light of him so that you won't have any trouble controlling his income until he is twenty-one.

O, the're thousands of opportunities to make your album interesting. It isn't interesting when you alone can enjoy it, to the extent that it is when someone can laugh with you.

Think what possibilities there are in a man, his wife, a child an empty pop-bottle!

Dont' give up your artistic efforts—stick to them by all means—but give enjoyment to others occasionaly, even if you have to separate the artistic from the "homey" pictures by using another album. . . . And now, the honorable Mr. Jones will take up the collection.

Teacher—Johnny, what is steam?
Johnny—Water crazy with the heat.—Life.

Monthly Meeting and Dinner of the

Photographers' Association of California

Held at the Stewart Hotel, January 7th, 1923

THE PRESIDENT: First of all, I want to wish you all a Happy New Year, and hope that you had a very pleasant and profitable Christmas, and I feel quite sure that you did, as you are all looking happy, which is a good indication that you are also prosperous.

(After several members had spoken, the President said:)

It is with regret that I report the serious illness of Dr. Neyman, one of our able and consistent members and a chairman of Committee. We hope that his recovery will be rapid and that he will soon be with us again; but we learn that his illness is really very serious.

At our last meeting we had a business address by Mr. Moyle, who gave us several things to think about. He was asked here for the purpose of giving us a bigger outlook and to help us to a larger view of business. He showed us that by co-operation and consistent advertising we could very much increase our business. The talks that we are having are not merely for our entertainment; they are for our instruction along the line of taking our places in the business life of California. Along that line we have invited another business man to talk to us tonight, who will give us some plans and help us in the direction that Mr. Moyle has started. This is the keynote of our Association—to upbuild our profession, not only artistically but financially as well. It gives me great pleasure to introduce Mr. K. Leroy Hamman of the Hamman Advertising Company.

MR. HAMMAN: Mr. Chairman, Ladies and Gentlemen: It is a pleasure, a distinct pleasure, to come here and talk to you a few minutes tonight on the subject assigned to me; it is a particular pleasure for the reason that the work you are doing, the business or industry or profession that you represent, has so much to do with human life and human happiness; it has so much to do with the sentimental or human side of our existence here. The photographs that we take, that we have taken, the photographs that we keep and preserve in our homes and elsewhere, are the things that enable us to turn back the pages of life and recall the days of yesteryear. Just last night I had occasion to tell my youngest boy the story of a mountain trip; he was already talking about his vacation of next summer, and I had promised him to go to the High Sierras. I brought out an old book that I had not seen for many years, and told him the story of a trip to the Piute Mountains of fifteen or twenty years ago. And that story was best told with the pictures. And in that old book there were others, photographs of high school days, of college days. Yes, the photographs which we have taken so long ago and still preserve have very much to do with the things that really matter in life—the memories of happy days and the friends who have gone.

Turning from the human interest side of this matter, we come now to the discussion of what we are here to talk about tonight, that is, photography as a business rather than as a profession. If you are followers of men such as Babson and others, who want to forecast what is ahead in business life, you will have read that each and every one who has had occasion to predict the future in business has stated that 1923 is to be probably the second year of a new era, that is, the selling era. We have had our periods of invention; we have had our periods of manufacturing, of production, of development of efficiency. But it seems that we have now raised our standards of production to such a point that we have reached an era when we shall be dependent upon selling, upon salesmanship. Babson says that those who do not seriously consider the matter of selling their product, selling their services to the public, in 1923, will not need to worry much about income tax. We are entering a period of very intensive selling competi-

tion, not particularly within our own industry or business, but in business as a whole.

Now, in speaking of co-operative advertising, I would picture to you two great selling classifications, two distinct types of selling problems, because it is through the understanding clearly of these two problems and their differences that we can best approach our problem. The first is the selling problem which changes the direction of an expenditure of money. Now, if any of us gentlemen here tonight, or any of the ladies, have decided that it is time to buy a new suit of clothes, and the problem is of one merchant as against another merchant, it is simply a change of direction of expenditure from one merchant to another. In other words, if I have bought my suits in the past from merchant A, and have found them satisfactory, the thing that B has to do is to convince us that his store is better, or his merchandise better, in order to direct our expenditure from A to B. This is a very simple, fundamental selling problem, but, nevertheless, it is a very important one. The problem of selling is a problem that we do not need to discuss here, but it is one of the simpler types of problems that merchants are confronted with.

The other classification is that condition in which an increased expenditure is called for. For example, supposing you are operating an office and that you have not sufficient stenographic help. Supposing a salesman comes along and wishes to sell you a dictaphone. In order to sell you a dictaphone, that salesman must make you feel the need of a dictaphone, must induce you to spend some money that you did not expect to spend. That problem has come up to many a manufacturer, to many a business man; it has been the problem of practically all of our great farmers and co-operating associations in these states. Take the orange growers, the first large co-operating association of farmers that was successful in advertising and selling. Their problem was not to induce people to buy their particular brand of oranges, or even California oranges as against the oranges from Florida or Southern Italy; but it was to induce people to buy more oranges, to get people to spend more money for oranges. The same condition existed with the walnut growers; but it was far more serious with the walnut growers, because, prior to the time of the advertising and selling campaign, the sale of walnuts was confined to that period of the year between Thanksgiving and Christmas, and it was almost as hard to sell walnuts after Christmas as it would be to sell a Christmas tree after the 25th of December. The whole selling effort of the walnut growers was concentrated into that one small section of the year. In order to lengthen out the selling season it was necessary to get the people to use walnuts at different times of the year when they had not been in the habit of doing so. That same problem confronts you gentlemen. There is, of course, a certain amount of business that can be developed by ordinary means; but there is also a great undeveloped market for photographs and photographic work which must be opened up if you are to increase your business to any great extent. One way to develop that business is to create a need for it. You are, therefore, confronted with the problem of getting the people to spend money that they did not anticipate spending.

You must know that you are not only in competition with each other—in fact, that is by far the least serious factor in competition—but you are in competition with everybody who is advertising to the general public anything other than the bare necessaries of life. People will spend money for those things which will bring them the greatest pleasure. And so, after the bare necessaries of life, food, clothing and so on, have been satisfied, the manufacturing concern or association that hollers the loudest convinces the people that they need the particular brand of merchandise that it produces, and that is the particular concern that is going to get the money. And what they get is so much the less for you.

In working out such a problem as we have mentioned, co-operative advertising is found to be far more successful than any other type of advertising. It is far more successful because there is less waste

in co-operative advertising, for the reason that no one concern could well afford to bear the burden of creating an undeveloped need. In a co-operative campaign, however, you pool your interest, your effort, your money; you pool enough together, to make a definite and concentrated drive that really gets the message through that you are trying to put over. And so in practically every industry today we have found that co-operative advertising has been found to be the most successful means of increasing a demand. And California, as you may know, is the birthplace of co-operative advertising.

The Sun-Kist Orange campaign of co-operative advertising was the first carried on in this country. So successful has that organization been in inducing people to spend money for oranges that the shipment of eight thousand cars in 1903 was increased to twenty thousand cars in 1921. The walnut people have, by the same means, increased the sale of walnuts from forty-nine million pounds in 1913 to eighty-five million pounds in 1919. Fresno today is an outstanding monument to the value of co-operative advertising. Most of you can remember Fresno as rather a sleepy place—one might almost say a dead place. Today it is very hard to get a room in a hotel in Fresno if you wish to stay over night. You have to drive a good many blocks to park your car. And sky-scrapers are going up on various corners. And all this because the raisin grower has been able to sell his crop, not needing to carry a hold-over crop so ruinous to his pocket-book and bank account. By co-operative advertising the demand for raisins has been so materially increased that in 1913 the per capita consumption of raisins in the United States was 1.1 lb. per year, while in 1920 the consumption per capita had risen to 4.7 lbs. per year; in other words, in seven years the consumption per capita of raisins had been increased four times, a really remarkable result.

Not only in California have successful co-operative campaigns been carried on, but at the present time co-operative advertising is being used by associations throughout the United States. Among the most important of these have been the national and local "Save the Surface" campaigns. The paint manufacturers have banded themselves together to create a demand for paint, to make the people realize and appreciate the fact that they should paint their buildings in order to preserve them. In that campaign they have spent an enormous sum of money, but the paint industry has increased in even greater proportions. Now they have adopted a slogan —"Double the paint industry by 1926."

In Philadelphia there is every indication that their co-operative advertising and selling campaign will get this result. Around the Bay, for the two past years, there has been a "Save the Surface" campaign, not a national campaign, but local, which has been advanced by local interests, and they have been very successful in increasing the consumption of paint.

Getting down to a simpler campaign, yet an exceedingly successful one, there is the campaign in Oakland. Six ice cream manufacturers there made and put on the market a brick of ice cream, calling it the "Hostess Brick," selling it at a uniform price. This was manufactured by each of the six ice cream manufacturers in addition to their regular brick and ice cream. One concern advised that their ice cream business had doubled in sixty days after the campaign started. Miller advised that their whole ice cream business, including bulk, was increased twenty-two per cent. This was one of the most spectacular small campaigns carried on in this country, on the Coast, at least.

The story of the use of co-operative advertising by the granite people of New England is full of human interest, even more spectacular than the California campaign. This association made a survey of conditions and found that their business in granite was gradually slipping away, that the marble people had been exceedingly active, and that granite was becoming a stone that was no longer demanded for monuments or building, and that the monument part of the business was the only one left. It seemed to be a dead proposition. However, by the use of co-operative advertising new life was given to the business and an intensive selling

campaign has recreated the granite market to such an extent that the quarries are now working twenty-four hours a day.

Co-operative advertising has done another thing; especially has it done a wonderful thing for the Fruit Association. It has lengthened the season, especially of the sale of walnuts. Almost all of our fruits were sold through a relatively short period of the year. The story of lemons is quite interesting. The demand for lemons was during the summer months, when people were quite willing to drink lemonade; but, by advocating the use of lemon pie and by showing other ways of using lemons, the Growers' Association has lengthened the demand to a twelve months' season. Lemons are picked every month in the year—the lemon works harder than any other tree—and if the lemons cannot be sold or used promptly there is a large surplus.

Co-operative advertising reduces the selling cost. The overhead part of your business expenses goes on regardless of whether you do a good or a poor business. The profit as profit comes with the last ten per cent of merchandise sold. If we can increase the business to an extent whereby it adds on at the end without increasing the overhead, our profits increase in a satisfactory degree. In the selling campaigns, the cost of selling has been reduced from six to three per cent. This has been true of practically every campaign of a co-operative nature; it has materially affected the selling cost in a downward direction; it has created a demand which the individual manufacturer or seller could cash in on. Not only does it reduce the selling cost, but it helps materially by elimination of selling waste, because, after all, highly competitive selling is inefficient and wasteful. You cover the same ground many times; you fight for business against rather than with the other fellow, and in the long run there is nothing attractive created. And in that connection we might say that co-operative advertising has a very material effect in building up a substantial goodwill and a goodwill that can be used, not only in increasing business, but in holding an association of this kind together, interesting new members, and so forth.

If you are going into a co-operative advertising campaign to create, not a need for photographs and photographic work, but to increase your business, let me recommend that you develop something new, something different, something unusual to advertise. The great merchandising successes of the past few years have been those who have built into the things which they had to sell, have built into the service they rendered, something a little different. Take, for instance, the great campaign of the Gillette safety razor. They found that their patents were running out, that the condition was such that they would have practically no particular excuse for existence. The solution was that they built a new type of razor, and their sales immediately mounted very satisfactorily. There are many other examples of manufacturers who so bettered or built in new ideas into their product that the public responded very readily to the advertising appeal. The "Hostess Brick" was extremely successful because there was a new name, a new kind of brick, a little better than the next. That in itself had a wonderful tendency to give a basis for the advertising and selling campaign, to give something new, something novel, something unique, something that people would read about and respond to.

Now, if you are going into a co-operative campaign I would certainly urge you against any form of advertising which made, as a basic appeal, the price. To make as an appeal either money-making or saving is certainly a strong appeal when it comes to the matter of things that we buy to sell again, when it comes to the problem of things that we buy regularly and where the saving of a few cents or dollars could make a material difference in the bank account at the end of the year. But price has never been a prime consideration when there is something to be sold that depends upon sentiment almost exclusively. The phonograph people when they started did not emphasize price. If you make people want the thing enough, they will pay what they can pay. All cannot pay the same price for the things that

they want, or we would not have Fords, Chevrolets, Packards and Lincolns. But a man will buy a Chevrolet car without any consideration as to price. I have heard the story told of the difference in the same individual man when buying a motor truck and a motor car. The motor truck was for the purpose of saving the concern money, while the motor car they would buy for pleasure with no thought of the price; but price and money were very serious considerations when it came to the motor truck.

When you come to selling that which has not to be resold, a thing that is to be given away, or that has a sentimental value, price does not help to create new business. As a matter of fact, I believe I can challenge you to state any example where price would help the selling where a sentimental value was attached. In stores that depend on price, the money appeal is used practically exclusively. These stores may advertise every day in the year, and get people to come because of their prices, but it is very evident—in fact, the head of one of these stores admits it—that they are making sales and not building business. Whereas stores of the other type, who do not make a feature of low price, render service in such a way that people come to them with confidence in the store and will return again and again. Price advertising does to make sales, but it does not build business, and there is quite a distinction between the two.

There are many forms, ways, mediums that might be used in co-operative advertising campaigns, but it would not seem desirable to go into a thorough discussion of these mediums here. However, there are mediums that will reach a type and class of people that you should reach. A co-operative advertising campaign could be so designed as to reach the greatest number of people who are your possible customers. Individual studios and photographers should use a sufficient amount of direct mail advertising to bring into the studio those people who are influenced and reached by the other advertising, who should cash in on the money thus expended. There are many forms of appeal, and I have often wondered why some of them were not used. A number of lunch and other clubs that exist today would give a wonderful field for business for photographers. Once a year all of these associations elect new officers; once a year there is always a demand for pictures of the officers for reproduction in technical magazines and association publications. Very few have up-to-date pictures of themselves, and there is quite a business in that one line alone if we wanted to make any effort to develop it. There is an inborn desire on the part of most men to see their pictures in print, yet when the real opportunity comes it always comes very quickly, and to get their picture in print they rarely have a photograph available. Being in the advertising business, I have had more or less experience along that line, and know how difficult it is to rush a man into a studio within a couple of hours.

There is also a wonderful opportunity of developing a photographic business among other groups of people that are anxious to get their pictures into the papers. Another thing that I have wondered at is why photographers have not carried out a consistent follow-up campaign to the mothers of babies, to see to it that these mothers have pictures of their babies taken at least semi-occasionally. There is not a mother that you can talk to but what agrees that she should have pictures of her children. They are always going to do it next month or next week; it is a matter of procrastination. The right kind of advertising would stimulate that latent demand, would help to put figures into your bank book. It is neglected because it is such a simple thing to do; but it is an important thing, and would be very effective indeed in bringing business into the studio. It seems advisable, then, to carry on co-operative advertising that will reach and influence and create that need for photographic work which should be consistently followed up by individual owners of studios in order that they may cash in on that advertising.

Now, there is a by-product of co-operative advertising, and the by-product is perhaps as valuable as the main product. It is the opportunity that is developed

through a co-operative advertising campaign of deevloping a spirit that will bring competitors closer together, that will knit an association into a very strong power for constructive good, and will to a certain extent eliminate that selfish spirit which always comes to the surface in any new organization. I do not care who the members are, it will materially help in developing a sense of moral obligation to support the association in anything that will result in the common good.

There was once an invalid who was told that he had but a few days to live unless he could find a certain blue flower that grew among the hills nearby. In his frantic desire to hold on to life he spent many days in the hills hunting for the blue flower, going hither and thither, up and down in the clear upland air. But, finally, he had to return to his physician and confess that he had been unable to find the blue flower. The physician smiled: "I think you have found what you went for!"

Co-operative advertising will stimulate and enlarge your view of business so that a demand for your work will be created, not merely at one time of the year, but spread through all the summer months. Co-operative advertising will certainly reduce your cost of selling, so that the selling power of the individual photographer will be more efficient. It will reduce the unit cost of production; it will strengthen the morale of your employees, which is a very important by-product of co-operative advertising. It does actually increase the morale of the people who are working for you by giving them a true idea of the importance of the business. It attracts new people to the business. I heard a man speak on co-operative advertising a little while ago, who said that the most important thing that it had done to their industry was to attract new young people who had an appreciation of the future of that business, and their particular industry needed men of that sort the very worst way.

Such a condition exists now here in California. The electrical industry is attracting a great many young men, the gas business is equally promising, although some people mistakenly think that gas is a dead issue.

Co-operative advertising corrects misunderstandings by telling the truth. I heard a lady, not over two weeks ago, state that she had gone down to a photographic studio for the purpose of having a picture taken of her little girl to distribute. She came away because this particular photographer had different prices for the same type of pictures; she felt that she had not received fair treatment, and took it for granted that photographers were all alike.

Co-operative advertising creates confidence and will therefore actually bring about more sales than you can by individual advertising. It fosters goodwill by pointing out the policy that will result to your mutual benefit. The public are becoming discriminating buyers and know the standards and type of work that they want.

When we know that co-operative advertising does actually help in making the world a better place in which to live, and puts photographs into our homes, corrects our eyesight, gives us more oranges to eat, then we cannot doubt that co-operative advertising is not only a powerful sales force but a real social service as well.

The Chairman thanked the speaker of the evening for his highly instructive and interesting talk.

The regular business of the Association was then proceeded with, followed by short addresses by a number of the members, among whom may be mentioned Messrs. Young, Lancaster, Seron, McCurrie, Morton, De Gaston, Wilton, McCullough, Webb, Shaw, Johnson, Lothers, Scott, and Mrs. Clark.

Our chief want in life is somebody who can make us do what we can. This is the service of a friend.—Emerson.

Art and the Crafts

A Department Devoted to the Encouragement of a Closer Relationship Between Photography and the Fine Arts

Foreground Trees

A foreground tree must of necessity occupy an area that from the standpoint of composition compels its pre-eminence in the picture, and this is equally true if the artist by vivid coloring or living interest forces the eye to some other object. Over and over again we see paintings, drawings and photographs in which human figures or animals are intended as the subject proper, but in which they could be omitted without in any way affecting the beauty of the picture. Among paintings I might mention Millet's "Bather" or "Goose Girl" and among pictorial photographs not a few of Annie Brigman's charming compositions. If anyone doubt this statement, let him compare what is left after in one case eliminating the trees and in the other the figures in, say, a tree-figure composition of Corot's.

The great value of trees is their adaptability to purposes of design. Be there a space to fill, light or dark, massed or broken up, there is always some tree that can meet the condition without violating the facts of nature or the probabilities of time or place. It was an appreciation of this fact that led the early painters to make free accessory use of trees. The Pompeian wall painters, no less than the Italians of the Renaissance, show such an understanding. They also show, what is unfortunately still to be frequently seen, a very limited study of the nature of the trees they painted. A space could be advantageously filled with a tree; that no man could tell what kind of a tree it is, seems of no consequence to this type of artist. No one is asking that a painting shall present a lesson in botany, but trees have as much personality as animals. An

STUDIES OF BARE TREES A GREAT HELP IN DRAWING

PHOTOGRAPHIC STUDIES ARE INVALUABLE FOR THE ILLUSTRATIVE ARTIST

artist who painted a figure that might be intended for a man, a gorilla, or a chimpanzee, but bore only a distant resemblance to any one of them, would find it hard to placate the critics, but he can do this with well-known tree forms and escape without censure. An art school gives to its students in the life class instruction in anatomy that often exceeds useful requirements, but to paint trees properly it

JUDICIOUS FOCUSING SUGGESTIVE OF BRUSH WORK

THE MASSING OF BRANCHES ENCOURAGES BREADTH OF TREATMENT

is as necessary to know the bare tree as it is to know in a figure the underlying skeleton. Books have been written on the subject, and I can strongly recommend the excellent work by that eminent painter, Henry East; but, well written and splendidly illustrated as it is, it only opens the subject. We need a systematic study of all trees that are likely to enter into pictorial composition, giving them bare, in early and full leaf; standing alone and in association; also under different conditions of lighting. I know of no more useful work that amateur photographers could undertake than to go over our flora in this way and publish the results in our photographic journals. Certainly the pages of Camera Craft will be open to studies of this description. It appears to the writer that a careful search through the thousands of photographs already published might fill the requirements in many cases.

I will return to this subject at a later period in a more systematic manner.

H. D'ARCY POWER.

The Amateur and His Troubles

Conducted by Edgar Felloes

For the Beginner

There is no magic in photography; to the beginner it may appear so; that is a mental attitude, nothing more. In order to master this proposition, let us disabuse our mind; after that our progress will be rapid. There are certain rules in the making of a photograph which must be remembered. Our exposure must be of a certain duration. Our developer must be of a certain strength and at a certain temperature; the same applies to our fixing bath. All these things have been figured out for us (see directions that accompany each box of plates or package of films and paper), and if we do these things we are sure of our results. Where is the magic?

Any worker desiring the pleasures of photography should learn to do the work for himself. I am not decrying the trade finisher; he is a necessity, also a great help to busy people. But I have never known any amateur to master photography by the finisher's aid.

The days of the large view camera, outside of professional work, are gone. The majority of us prefer small cameras for many reasons. Though the pictures are small as contact prints, it is so easy to enlarge the best of them. Naturally we need an enlarging camera for this purpose, but a good one may be purchased for a very reasonable price, and this is far better than building one. Don't tinker, but be resourceful. Your time is worth money as soon as you can convince yourself of that fact. My advice is, to purchase a properly constructed camera and make it pay for itself. The temptation to excuse one's self for indifferent work is very strong, especially when operating a home-made machine. Get a good enlarger, then, and be strict about the quality of your work.

We will now consider the cost of the enlarger and how to get your money back if it is necessary for you to do so. It is a matter of business and not difficult for one with average business ability. The Eastman Company have on the market the Kodak Auto-Focus Enlarger; it sells for $35.00, and it will do what is required of it. It focuses the negative upon the bromide paper automatically. It is quickly set up and ready for work, and as this may be done in the evenings, enlarging with so little trouble may be looked upon as a pastime and should be enjoyable.

I will presume you have learned to make a negative. By operating the tank according to directions this is not at all difficult. Apart from the question of exposure, the thinking has been done for you. And the matter of exposure has been simplified by using a light gauge or meter. I have noticed that novices frequently show better results in their early efforts than in their later ones. I can only account for this by their growing careless. The outcome probably of an early impression of how simple it all seemed.

We now come to the proposition of getting your money back. Remember, there is only a very moderate outlay to recover, and it can be done in the following way: As soon as you can make a presentable enlargement, you can sell it if the subject contains real interest. Don't overlook the three last words of that sentence. Just pictures are difficult to sell—there are so many of them. Pictures that have a personal interest sell themselves. The average parent is intensely interested in a story-telling picture of the children. Do not offer that parent a portrait suggestive of professional work; you invite comparison with such work and you are likely to fare badly. Show the youngsters at play or doing something. That will put your work over. Do not think that because you

are an amateur you should ask next to nothing for your work. This is all wrong. Make the type of picture that is wanted and the question of price is quite secondary; there is no competition. Do not make your enlargement too big. A 5 x 7 print, including the margin, on double-weight paper, is plenty large enough. Do not mount your prints; it reduces your profits. Put the value in the picture itself. When submitting your sample print, quote on not less than half a dozen of these small enlargements and count the sample as one of them. Don't make a present of it, and when you secure the order take the sample with you. You need it as pattern, and see that you match it with the rest of the prints. Supposing, on the other hand, you could only secure an order for one print, the price of that print should be sufficient to cover the cost of the negatives you probably had to make; perhaps four negatives would be a safe average. If your customer should be so pleased with your work, and desire a print for framing, it would be better to have a trade enlarger do the work for you, and you should ask double the price you paid for it. This is quite fair, as without your negative there would have been no business done. Naturally when you become proficient you could undertake much of this work for yourself, provided you had a suitable place to work in.

This is only one suggestion. Do not forget the owners of fine cats and dogs, especially of the exhibition variety. And if you live in the country, good specimens of horses and cattle should have attention. If you will work along these lines, you will see it takes only a short time to get your money back. It was not so very long ago since a photographer called at my office with a good-sized bundle of enlargements; they were all views, and good views, and the photographic work was good also, but they were not selling. This man did not seem to realize it; he was trying to break into a market that is glutted, and it is difficult to do and takes time. I mention this to you to impress you with the importance of making the picture the other fellow wants and will pay for. Lastly, let me impress upon you the importance of quick delivery after the order is secured. To strike while the iron is hot is a saying that will ever be true.

(Concluded next month)

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.

If there is no officer in your State, address the General Secretary

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

STATE SECRETARIES

California—A. E. Davies, 1327 Grove St., Berkeley.

Colorado—H. E. High, 1023 Champa St., Denver.

Idaho—Eugene Clifford, 902 9th Ave., Lewiston.

Iowa—Harry B. Nolte, Algona.

Kansas—H. H. Gill, Hays City.

Louisiana—Samuel F. Lawrence, 1754 Laurel St., Shreveport.

Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.

Missouri—J. F. Peters, Room 408, Union Station, St. Louis.

New York—Louis R. Murray, 927 Ford Street, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

ALBUM DIRECTORS

Alabama—G. H. Brown, Box No. 333, Florence.

Canada—C. Deyo, care Denike Drug Co. Ltd., Amherstburg, Ont., Canada.

Colorado—O. E. Aultman, Plested Bldg., Trinidad.

Connecticut—Harry E. Carpenter, 389 Remington Ave., Bridgeport.

Florida—Capt. E. S. Coutant, Lock Box 73, Stuart.

Georgia—L. O. Surles, P. O. Box 434, Cuthbert.

Idaho—Eugene Clifford, 902 9th Ave., Lewiston.

Illinois—George A. Price, Box 286, Champaign.

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Massachusetts—John Mardon, 10 High St., Boston.

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Minnesota—Leonard A. Williams, 622 2nd Avenue South, St. Cloud.

Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

New York—Charles F. Rice, P. O. Box 245, Mamaroneck.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave., North Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2 Painesville.

Pennsylvania—L. A. Sneary, 2822 Espy Ave., Pittsburg.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—J. B. Obeim, P. O. Drawer M, Henrietta.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

NEW MEMBERS

5222—P. E. Hixson, Tyler, Texas.
2½ x 4¼ and 3¼ x 5½ Azo of general, landscapes and city scenes; for landscapes and marines. Class 1.

5223—Chas. J. Dewey, 1954 West Congress St., Chicago, Ill.
5 x 7, 4 x 5, and 3¼ x 4¼ Cyko of mostly landscapes; for landscapes and architectural subjects. Class 1.

5224—H. B. Couch, 109 West 6th Ave., Topeka, Kansas.
V. P., 2A, 3A, and 5 x 7 Azo Velox Matt and Glossy of local views of interest; for same and figure studies. Class 1.

5225—Geo. Legge, Granby, Quebec, Canada.
I desire to exchange only lantern slides.

5226—Charles H. Plyer, Skinner Machinery Co. Dunedin, Florida.
Class 2.

5227—Roger A. Hart, 811½ First St., Newberg, Oregon.
Class 2.

5228—Dr. Geo. Richter, 3538 Humphrey St., St. Louis, Mo.
5 x 7, 8 x 10, and 11 x 14 of landscapes, portraits, architecture, and still life; for carbon prints, Kallitypes, Multiple Gum, Glue Prints, Bromoil and Oil Transfers (mostly mounted). I desire to exchange only by loaning details arranged by correspondence. Class 1.

5229—Dr. C. W. Clark, 217-2nd Ave. W., Ashland, Wis.
3¼ x 4¼ negatives and prints Haloid and Velox of North Wisconsin scenes, child portraits out-of-doors; for pictorial and landscapes. Class 1.

5230—John P. Geertz, P. O. Box 165, Turtle Lake, Wis.
Class 2.

5231—S. T. Powell, Greensboro, Alabama.
3¼ x 5½, up to 6½ x 8½, of views and portraits; for the same. Class 1.

5232—H. N. Delmonico, Shawatlans Power House, Prince Rupert, B. C., Canada.
2¼ x 3¼, 3¼ x 5½, 5 x 7, and other sizes when arranged. Azo, Cyko, Arturo and Iris of Landscape Views of Northern B. C., pictures of Indian totem poles, etc., and miscellaneous subjects, also special subjects when arranged for; for anything of pictorial interest, but would like to receive some girl poses, also figure studies to use in connection with an art course. Best attention to all senders. Class 1.

5233—Harry C. Robey, Box 100, Plain City, Ohio.
1¼ x 2¾, 3¼ x 4¼, 4 x 5, 5 x 7, 6½ x 8½, and 8 x 10, of landscapes, birds and general; for interpretive models. Class 1.

5234—N. T. Oishi, c/o Josho Kabushiki Kaisha, 14 Honcho, Yokohama, Japan.
2¼ x 3¼ and 3¼ x 4¼ of landscapes; for anything of general interest. Class 1.

RENEWALS

3024—Franklin F. Wells, 114 McCann St., Benton, Ill.
3¼ x 4¼ to 5 x 7 single and double weight of general subjects and some speed and high-class portraits for the same. Only first-class work sent out and accepted. Class 1.

3326—Corbin B. Stambaugh, Box 36, Browning, Ill.
Class 2.

4233—Harold Sherer, 1031 Walnut Ave., N. E., Canton, Ohio.
Class 2.

4413—Wilfred Hickman, Fairmount, Ill.
Class 2.

4549—Fred Goodin, Covington, Ind.
Up to 8 x 10 dev. paper of scenes in Indiana and prints of most everything; for anything of general interest. Only good work sent out and accepted. Class 1.

4725—4½ x 6½ on glossy paper for landscapes, including hills, rock formations, and anything of interest geologically; also bathing girls, figure studies, and portraits by flashlight, artificial lighting, etc. I send all work on approval, and invite correspondence from mountainous regions and the South. Class 1.

4865—H. Cleve Burr, P. O. Box 372, Auckland, New Zealand.
V. P. to ¼-plate of general views of New Zealand; for landscapes, marines, still life, etc., and genre. Class 1.

5014—G. E. Daniell 286 Coming St., Charleston, S. C.
Post cards and 4 x 5 of miscellaneous subjects; for the same. Only good work sent and accepted. Class 1.

5099—Mrs. Lottie Louthen, West Terre Haute, Ind.
4 x 6 and smaller Azo, Haloid and Cyko of Wabash River and views of general interest; for the same and views of historical interest. Class 1.

5102—W. O. Lott, Provincial Auditor's Office, Regina, Sask., Canada.
Class 2.

5130—Roy H. Heiser, 227 Washington Trust Bldg., Washington, Pa.
All sizes up to 8 x 10 of artistic portraits of children, also artistic child nudes; for the same. Class 1.

5149—T. M. Caldwell, Box 695 Amarillo, Texas.
3¼ x 5½ extra fine prints of mountain, cloud, Indian prehistoric communal houses, etc.; for beach, bathing girl, nude, etc., for art class purposes. All inquiries answered promptly. Class 1.

CHANGE OF ADDRESS

424—John Stimpffl, 502 Wilson Ave., Brooklyn, N. Y.
(Was c/o Alexander Hamilton Inst., 13 Astor Pl., New York, N. Y.)

Our Book Shelves

First Principles of Advertising

By Wilbur D. Nesbit, Vice-President William H. Rankin Company

In a goodly company of big volumes on the same subject comes a modest little volume that makes its presence felt. For Wilbur P. Nesbit, as one who has served a trying novitiate and achieved the vice-presidency of one of the largest advertising agencies in the land, knows much of advertising and has helped to make many advertising men.

We take it that he strives to reach a larger audience than the employees of his own firm, to educate not only the writers of but the buyers of advertisements. To make men know what they want or should want, and to help them by the shortest ways to get just that. In this we are prepared to say he succeeds. It has been our privilege to review some half-dozen books on this subject, and we approached each new effort with a little dread of being bored by repetition and redundancy, but the facts proved that advertising is as variable and as inspiring a subject as romance. Each writer seems to approach the desideratum from a different point. The road is never the same, and the by-ways and passing views offer the charm of novelty.

This little book has a large place in the literature of business, and its brevity, conciseness, compactness, and withal its comprehensiveness, will recommend it to many who would shun a heavier tome.

111 pages. Gregg Publishing Company.

—S. B.

Notes and Comment

Reported by Wm. Wolff

H. Sackrider and wife are taking a much-needed rest in San Francisco just after the first of the year. They hail from Marysville.

A few good studios for sale. Write Hirsch & Kaye for particulars, 239 Grant Avenue, San Francisco, Calif.

O. Hagman of Watsonville is going to visit Sweden next year.

John Hall and Frank Aston of San Luis Obispo, Cal., are both rested up after the holiday rush, and are ready to take on all the business they get.

Richard A. F. Lavelle, formerly with Geo. Henry Kahn & Co., San Francisco, has joined the ranks of Hirsch & Kaye, and will be glad to see any of his old friends.

Recent visitors in San Francisco were M. E. Charleston, of Vancouver, B. C., George W. Reynolds, of Santa Cruz, Cal., also Gustave Goehner, formerly photographer of Petaluma, who will publish a book soon of great interest to music lovers.

Hammersmith Hampshire House Photographic Society

(Affiliated to the Royal Photographic Society)

The 1923 annual exhibition of this society will open in April next, and the last date for receiving entries will be March 31st, 1923.

This exhibition has for some years been recognized in England as one of the premier shows, and efforts last year to extend the connection abroad—both in the United States and elsewhere — met with considerable success.

There will be no awards for pictorial prints, but there will be a rigorous selection, carried out by a board of three. Mr. J. Dudley Johnson, F. R. P. S., and Mr. Herbert Lambert, F. R. P. S., will represent landscape and portrait photography respectively, while the third member will be a prominent artist in another medium whose name had not been decided upon.

Any of our readers desiring further particulars and entry forms should address the Secretary, Mr. J. Ainger Hall, "Norton," Ruislip, Middlesex, England.

Pittsburgh Salon of Photography, 1923

The Tenth Annual Exhibition of the Pittsburgh Salon of Photography, under the auspices of the Photographic Section of the Academy of Science and Art, will be held in the galleries of the Carnegie Institute, Pittsburgh, Pa., from March 2nd to 31st, inclusive, 1923. The Exhibition will be open daily 10:00 a. m. to 10:00 p. m., Sundays 2:00 p. m. to 6:00 p, m, Press view Friday, March 2nd, 1923, from 8:00 p. m. to 10:00 p. m.

The aim of the Pittsburgh Salon is to exhibit only that class of work in pictorial photography in which there is distinct evidence of personal artistic feeling and execution.

All work submitted to the Committee of Selection will be carefully and impartially considered and no preference will be given the work of members of the Salon.

All pictorial workers are cordially invited to contribute.

CONDITIONS OF ENTRY

No. 1. No picture eligible that has been shown at a National Jury Exhibition in the United States prior to April 1st, 1922.

No. 2. An entrance fee of seventy-five cents must accompany each entry form, addressed to the Secretary. This fee covers the entire entry.

No. 3. Pictures, except from foreign countries, must be mounted **BUT NOT FRAMED**, as the entire Exhibition will be hung under glass. Accepted foreign pictures will be mounted by the Committee.

No. 4. Mounts for pictures must not exceed 24 inches by 26 inches, and white or light toned mounts of medium or light-weight stock should be used.

No. 5. Each picture must bear on the back plainly written, its number, title, name of the artist, and return address, to agree with the entry form. Sale prices on **entry form only.**

No. 6. Not more than six pictures may be submitted by any one contributor.

No. 7. Entries from the United States may be forwarded by post or express, but foreign entries should be unmounted and forwarded only by post, marked "Photographs for Exhibition Only—No Commercial Value."

No. 8. All pictures must be sent prepaid and packed flat with sufficient, substantial protection for safe conveying both ways, and must reach destination not later than February 5th, 1923. **USE ATTACHED SHIPPING TAG.** They will be repacked and returned **After Close of Exhibition**, charges prepaid.

No. 9. Unless otherwise specified, permission to reproduce is presumed.

No. 10. All possible care will be taken, but no responsibility is accepted by the Salon for loss or damage in transit or at the gallery.

No. 11. The submission of pictures will be understood to imply acceptance of above conditions.

Note: Last day for receiving prints, Monday, February 5th.

Address all COMMUNICATIONS (not pictures; see rule 8) to

CHAS. K. ARCHER, Secretary,
1412 Carnegie Building, Pittsburgh, Pa.

University of California Extension Division

The Technical Side of Etching is the subject of the lecture to be given by Professor Roi Partridge of Mills College at 8 o'clock on Thursday evening, January 18th, in the lecture room of the San Francisco Public Library, Civic Center.

This lecture is the first of a series to be given under the direction of the Archaeological Institute of America in co-operation with the University of California Extension Division, to which the public is cordially invited without charge.

Regarding the lecture, Professor Partridge said: "I have found that a certain romantic mystery, in the minds of most people, has grown up about etching, coupled with a good deal of ignorance concerning just what it is. I propose to explain the processes; to illustrate with examples; to exhibit plates and tools, inks and papers; to show the difference between etching and similar or apparently similar processes, such as wood carving, photo-engraving, or zinc; and, finally, to show how an etching is inked and wiped preparatory to printing."

Professor Partridge is the director of art at Mills College and an etcher of distinction whose work has been enriched by travel and study in Germany, France, Italy and Switzerland. He has been honored by receiving the following medals and prizes: Two silver medals, Alaska-Yukon-Pacific Exposition, 1909; Syndam Silver Medal, National Academy of Design Schools, 1910; Logan Medal, Chicago Art Institute, 1921, and purchase prize, same date, various purchase prizes at earlier dates; Nathan I. Bijar Prize, Brooklyn Society of Etchers, 1921, for best print by exhibitor not a member of the Society, awarded on etching "Las Gomas"; O'Melveney Prize, Printmakers of California, Los Angeles, 1922, for best etching shown, awarded on etching "Mills Hall"; Nahl Purchase Prize, California Society of Etchers, San Francisco, 1922, on "Las Gomas."

His etchings hang in such notable places as the Chicago Art Institute; Worcester, Mass., Museum; the Library of Congress; the State Library of California, Sacramento; Print Rooms, New York Public Library; Newark Public Library; Seattle Public Library; Walker Art Gallery, Liverpool; Park Museum, San Francisco; Toledo Museum; Los Angeles Museum.

RECENT PATENTS

1427615 Process of Producing Educational Photographs, C. F. Merriam.

1427741 Photographic Developing and Fixing Apparatus, F. E. Jones and C. A. Schwab.

1427750 Photographic Apparatus, G. A. and R. I. Lewis.

TRADE MARKS

157490 Photographs. MacDonald De Witt, New York. Assigned to Pacific and Atlantic Photos., Inc., New York City.

158010 Developer for Photographic Purposes. Mallinckrodt Chemical Works, Germany.

158110 Condensing Lenses used in Motion Picture, Spotlight, Stereoption, and Photographic Apparatus, Sussfield, Lorsch and Shimmel, Germany.

158194 Chemicals used in Photography, Bromograph, A. G. Manheim, Germany.

158195 Same as previous trade mark.

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A Photographic Monthly

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CONTENTS FOR MARCH 1923

California Street Towers (Frontispiece)	By P. Douglas Anderson	
The Little Theatre of the Hills	By Chas. P. Nelson	103
The Story-Telling Picture	By the Associate Editor	108
Memories or Pictures -Which?	By H. E. Morehouse	112
A Talk on Winter Photography	By A. H. Goud	114
Photography and Fretwork	By Edgar Felloes	117
Deer in Mid-Winter	By W. Wynne Bolton, B. A.	120
Design in Background Effects	By Fred Telfer	121
Our Frontispiece	By E. F.	122
II--Bromoil and Bromoil Transfer	By Chris J. Symes	123
Yosemite in Winter	By H. S. Lawton	125
Commercial Photographers' Association of L. A.	Photo by Weaver	127
How Much Should the Advertising Photograph Show	By Wilbur Perry	131
Editorial		135
The Passing of Carl Paul Goerz. Silhouettes: A Suggestion.		
The Photographic Association of California		136
For the Professional		142
The Amateur and His Troubles		144
Club News and Notes		145
International Photographic Association		147
The Commercial Picture Exhibit		148
Notes and Comments		149

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San Francisco, California

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	Kodak, Australasia, Ltd., Sydney
Brazil	Casa Stolze, Rua Direita, No. 14, Sao Paulo
China	Squires, Bingham & Co., Shanghai
England	Francis Collas, 3 Wine Office Court, Fleet Street, London, E. C.
India	American Advertising Syndicate, Post Box 859, Fort, Bombay
Japan	K. Kimbel, Yokohama
Malta	Do Agius Catania, 41, Sda. Reale, Valletta
New Zealand	Richard Hill, Matlock House, Devonport, Auckland
Philippine Islands	F. O. Roberts, Manila
Scotland	Robert Ballentine, 103½ St. Vincent St., Glasgow

Good Things Coming

We have an illuminating article on the interesting subject of bromoil transfers, with many illustrations, written by A. Niklitschek of Vienna, a well-known expert.

A series of articles by Sigismund Blumann, a writer we all love for his genuineness and his practical research work. The first will deal with the soft focus lens.

Sleeping Bag, by Will H. Walker. It will be illustrated and invaluable for campers.

The illustrated articles on Wild Life Photography by Stanley Clisby Arthur will be resumed, interesting to all lovers of out of doors.

In the Path of a Cyclone, with illustrations by Dan E. McCaskill of the University of Texas. This is of scientific interest.

Camera Craft Publishing Co.

Claus Spreckels Building San Francisco, Calif.

CALIFORNIA STREET TOWERS

By P. DOUGLAS ANDERSON

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D.. Editor-in-Chief
EDGAR FELLOES, Associate Editor

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The Little Theater of the Hills

By Chas. P. Nelson,
Summerland, B. C.

With Illustrations by the Author

Note: We feel what we believe is justifiable pride in being able to present to our readers something entirely new in silhouettes.

Compared to silhouettes as we are familiar with them, these pictures stand apart. There is an atmosphere in these creations wholly distinct from the brutal harshness we have been accustomed to, and we hope these illustrations will draw attention to the higher possibilities of this beautiful art.

We suggest a study not only of the sentiment, but of the admirable execution. The thought will grow upon one.—E. F.

At Naramata, in the heart of the enchanting valley of the Okanagan in Southern British Columbia, situated in the midst of large orchards of apples, peaches and apricots, surrounded by majestic pine-covered hills and overlooking the beautiful Okanagan Lake, stands the "Little Theater of the Hills," the home of the Canadian Players. It is a tangible expression of an ideal held by Mr. and Mrs. Carrol Aikins to found a theater "for the service of beauty and for a true expression of the Canadian spirit, to be used by the young actor as a training ground for his abilities and by the young poet as a testing ground for his work."

Mr. Aikins has extensive orchards at Naramata, and the Home Theater is built above the fruit packing house of the ranch, situated high up from the lake, with a wide sweep of sky, water and far-off fruit orchards to be viewed by the audience as they enter the theater. The theater was formally opened in November of 1920 by the Prime Minister of Canada, who came specially to Naramata for the dedication.

The players, who are recruited from all parts of the Dominion—and this season from New York also—assemble at Naramata in the spring of the year and put in four or five months' training on works for production. This season two productions were staged by the players, but it is the first of these "Through Defeat to Victory" to which I wish more particularly to draw your attention. It is a form of Passion Play depicting scenes from the Life of Christ acted in silhouette without words.

THE ADORATION

It was my pleasure this summer to make a number of negatives, a few of which are reproduced in this number of Camera Craft, and it may be of interest to readers to have some details as to how the pictures were made. The power to provide the light is generated by one of the ranch tractors, which is coupled up to a dynamo, bought from an abandoned mine far up in the mountains. The stage lighting system is possibly the most modern and complete in Canada. It was installed under the supervision of Mr. Aikins and with the advisory assistance of two of the foremost stage lighting experts on the continent. The battery of twenty dimmers, controlling spots, borders, strips, floods and house lights, is in turn controlled by a master dimmer, the entire lighting organ being a masterpiece of modern designing. The stage is backed by a white curved plaster wall, and for these silhouette pictures the only light permissible was the light thrown on to this wall from above, below and the sides, the source of the light being altogether from behind the actors. Of course, no reflected light was allowable or it would tend to destroy the clear-cut silhouette effect; and to insure this, everything about the stage was painted a dead black, while the walls, ceiling and floor up to a distance of about twenty feet in front of the stage, were covered with black cloth. For the actual production of the play, the lighting effects in color were very beautiful, but in the making of the pictures I sought to avoid complications by making use of white light only.

For the picture entitled "The Resurrection" the concentrated light behind the figure was given by a 1000-watt lamp placed to one side of the

MARY OF BETHANY

stage, the light being focused on to the wall immediately behind the figure. In addition to this lamp, the light from six 250-watt lamps was thrown down from above and a row of ten 100-watt lamps was placed on the floor of the stage behind the figure to provide the general illumination. Using a Royal Polychrome plate and a stop of F 8, the exposure was in the neighborhood of three seconds. I think that with a few adjustments in the matters of lighting, stop, etc., the exposure could easily be reduced to a second or even half a second for this kind of work. All that is necessary is to have sufficient exposure to accurately reproduce the light and shade shown on the white plaster wall behind the actors. The development of the plate was carried to such a stage that the concentrated light on the wall behind the figure would hold up under the printing light until the figure itself was sufficiently exposed to develop up a good black. The paper used for printing was Wellington bromide, soft, white chamois. My reason for using a bromide paper was that while I wanted a good strong print, I was even more anxious to avoid harshness. No doubt, an equally good print could be produced on a gaslight paper, yet my preference lies with

THE TEMPTATION

bromide, provided, of course, that the negative has sufficient quality about it to stand up under the printing light.

It is a point of some importance in work of this kind to use either a well-backed plate or a film. Some of my exposures were made on backed plates and some on films. I have not been able to decide that the film possessed any advantage over the plate in so far as the avoidance of halation is concerned, atlhough they certainly gave me results every bit as good. Besides using orthochromatic film, I made some exposures on panchromatic film, but was not able to detect any marked advantage in doing so. Of course, if the exposures had been made by means of the regular lightings used in the production, then there is no doubt that the only satisfactory plate or film would be a panchromatic one. If I might digress for a moment here, I would remark that there are some panchromatic emulsions which are apparently not sufficiently sensitive to the greens and in some cases where using them for landscape work, it appears to be almost impossible, however much exposure is given, to get proper detail in certain shades of green.

THE RESURRECTION

The technical details regarding the making of the other pictures reproduced were practically identical with those already described.

To anyone attempting to undertake such a branch of photographic work, one or two suggestions may be of assistance, and without doubt the most important one is that you should not make an exposure unless you **know** what the length of that exposure should be. Always be sure to make and develop a few test exposures beforehand. You cannot afford to allow half a dozen or a dozen actors to get into costume and have the bother of perhaps a special make-up for photographic purposes, and then to fail

down because your exposure is incorrect. Again, I would suggest the use of a fast plate or film, the fastest you can get. It used to be that the fastest plates were often the poorest plates, but the fast plate of today is far superior to that of a few years ago. If you use any standard make of plate you may be assured that with proper development it will work cleanly and give you ample density. Do not spoil a good exposure by over-development. Your developer should not be too energetic; if it is, dilute it somewhat and stop developing when your high lights have just sufficient body to stand up under the printing light.

The Story-Telling Picture

By the Associate Editor

For popular interest there is nothing to compare with the story-telling picture, one with a human appeal. Most of our salon exhibitors confine themselves to landscapes, portraits and some still life, but genre subjects, the most popular of all, seems to be avoided. The fact of it being difficult is hardly a sufficient reason for its avoidance; its comparative rarety has, we think, caused this branch of art to be overlooked. What we really need are a few good and resourceful photographers to set the pace, and it would not be long before others would give the subject serious consideration.

Photography is peculiarly suited for pictures of this sort. Well-known painters have established their reputations through art of this kind, but photographers who have attempted it generally give us the husk, forgetting the poetry altogether.

The subjects found in these genre pictures are invariably simple, sometimes a familiar home scene. The important point is not so much the subject itself as how it is treated. When Millet the painter made his famous picture, The Angelus, had he stopped with the painting of two peasants we should have had the husk of it, but by introducing the spirit of devotion and enhancing it by suitable light, we are uplifted. The song was in the painter's heart; he shared it with us. We can do even this in photography, if we are not deaf to the music. No subject, then, is too commonplace if we feel and can show the poetry of it.

Another reason for producing this form of picture; there are so many uses for it and it gives pleasure. There are two ways of following this line, the one by careful composition with a subject in tune with the worker. Here the lighting is most carefully studied and non-essentials are subdued. Just a photograph is not what we want, but a picture we must have. Provided we do not lose spontaneity, and the picture is free from "posing," we stand a fair chance of success. The second way is to be on the alert

THE COMIC SECTION
Photo by P. Douglas Anderson

with a small camera. This will call for many films, but one success is worth many failures, and do not forget your light, even out of doors. For instance, you may see some urchins playing at marbles; a snapshot of such a scene, though technically good, may be worthless; but let the sunshine flick the group, glorifying some tousled head and stooping back, then you have something. Poetry has come into the work; we are grateful.

Glance at our picture entitled "The Comic Section," made by Mr. P. Douglas Anderson. Much of the charm of this work lies in the happy effect of light. It takes but little imagination to realize how this subject would suffer had the photographer been indifferent to his lighting. This is not all; the subject of background has also received attention. Notice it is out of focus. Had it been otherwise, the group of boys would not have been detached; the background would have worried the whole composition. These things all count in picture making and distinguish photographic art from mere photography. We can only repeat: it does not matter so much what you do; the all-important thing is just how you do it. Not only do we play with our light, but certain compositions will demand

of us considerable thought on how we place our shadows. Either one or the other cannot be ignored if we would save our picture from the commonplace.

Animal pictures, too, that tell a story, have a lively appeal to numberless people. Many readers may recall from countless engravings, Landseer's "The Shepherd's Chief Mourner." Here we were shown a partial view of a casket in the humble cottage, and by the side of this casket, with his head resting upon it, sat the faithful dog. This picture really did not need a title; the story was well told without it.

Probably the memory of this picture tempted a photographic friend to try something on his own account. He was an enthusiast, of course. Many of the writer's friends are enthusiasts—birds of a feather, you know. Well, this friend armed himself with a shovel, took a boy and a dog along and hied him to a lonely spot. There he dug a grave! This sounds dreadful; we must hurry on. After making the grave and piling the earth up "all pretty like," he drove a stake into the ground and tied the dog to it. It was now the boy's turn; he was instructed to sit behind some bushes out of sight, and presently there came from the hiding place the tune of Old Black Joe, played on a mouth organ. The dog was alone; even his master had forsaken him, and he felt if he ever had occasion to howl, now was the time. And he did.

This picture proved only a partial success. The dog did his part wonderfully. He remained close to the stake and the rope did not show. It was clear he was sad and howling. It was his master who failed; he failed in his focusing. His background, which consisted of bushes, was as sharp as the hair on the dog, and the relief in consequence was completely destroyed. A longer focus lens would have made a wonderful picture out of this idea, and the picture would have been a money-maker.

There is no need to stress the sad or mournful in our pictures. Let us have happy subjects. At least strive to win a smile from the spectator; he will think more of you for it.

Animal pictures, naturally, are difficult to do, but we can never tell when an opportunity may present itself. We print here Mr. De Gaston's picture, "What Makes You So Pale?" This should delight the children. Mr. De Gaston's forte lies in child studies. Some of you may remember the beautiful boy's head published as frontispiece in our February issue over the caption "The World and All—Before Him." We have another, "Chubby"—some may like him even better. He will appear in our April number.

The following notes will be helpful to those who may wish to give this fascinating, even exciting, branch of work a try-out. Quickness is essential, and so is patience at times. Use a long-focus lens if you have one. In the event of one not possessing such a lens, remain far enough distant from your subject that it may easily fit your film or plate. For example,

"WHAT MAKES YOU SO PALE?"
Photo by De Gaston

if your camera is a 3¼ x 4¼, try and get your picture within about a two-inch square and focus as sharp as you can. The practice has this to recommend it: As you are now using a narrow angle, you will greatly avoid distortion, and as you often have to work quickly you are less liable to have a part of the picture off the plate. If, on the other hand, we fuss to make the group fit our negative, we are almost sure to lose something of vital importance. A 2 x 2 negative, if good, will be plenty large enough to make a good 6 x 6 print by projection, and it will be found that this will meet the requirements of most publications.

Do not on any account copy some known picture. The photographer invariably suffers by so doing. He becomes ridiculous—he is ridiculous, because he advertises the other fellow instead of pushing himself.

We have seen this very thing done frequently, and to make matters worse, we once saw the original picture (Nydia, the Blind Girl of Pompei) printed alongside the photographic imitation. We hated the photographer at once. His attempt was so presumptuous and feeble that we trust he has learned to blush every time he thinks of it.

Memories or Pictures -Which?

By H. E. Morehouse

With Pictures by the Author

One day, once upon a time, the Only GIRL and her abject slave set out on one of their rambling expeditions, starting from Broadway and 145th street.

Having long since disposed of such photographic equipment as was once possessed, your soon-to-be a "Benedict" conceived the idea that a Brownie 2A would be part of the "company" and not any crowd. The corner drug-store offered the opportunity, and my three-fifty did the rest for the "box" and two 12-exp. N. C. celluloids, and we were off.

Van Cortlandt Park and the hills along the Putnam Division of the N. Y. C. R. R were our objective. The Only GIRL says you may **not** (note the emphasis on that "not" and beware!) have a copy of the first snap I took. Well, neither may you have one of the first one SHE took. The third one taken, the old-fashioned sun-dial in the garden of the Van Cortlandt Manor House, a place venerable with age and hallowed by its intimate association with Washington and Colonial days—the third one, I repeat, was not so bad, and right there after developing the film the "bug" had me all over again.

Our Brownie 2A is now in the hands of our eleven-year-old "Brownie" —my Junior namesake, and he will soon graduate from that class and wee Sally will "shoot" with the "one-eyed monster"—literally (one finder is broken). Son now wants my Seneca Chief with anastig., working f 7.5 and Ilex General Shutter, which took the other pictures except Son at three and four. He shall have it when he masters its problems, as a Graflex has me now, and if your editor is kind to "ye scribe" and publishes this it will help the boy get his Seneca.

The poem "My Camera," by John Wooster, which you printed a few months ago, seems to be a tale of our camera. Can Memory, sweet as it is, yet tempered by some measure of sorrow, tell the things of yester-year like the pictures taken by your camera? Emphatically, No! One of our albums tells the age-old story of outings and house-parties when as the latest engaged couple you travel in a land only known to them who have been there.

Several albums are needed to record the history of the cherubs who have come to bless the home of the Only GIRL and her still abject slave. We will not ponder long, but it must be recorded that the faithful eye of the camera still preserves the tiny features of one little mite who stayed only a short few weeks and then sped back to the Mansions whence she came, and with that picture is treasured the one of the spot in God's Acre

MEMORIES AND PICTURES

where she sleeps, but as it looked the day her grave was strewn with the flowers of loved ones. Is not memory sweeter for the picture?

We have the Boy the first day he ever went out into God's sunshine, held in the arms of his nurse, and the Daughter for the same historical settings, and both of them up to eleven and five respectively now. Brother had a "bike" when he was four, so Sister had a "trike" when she was four. As Irish-mails were the rage in Pittsburgh when Son was three, Sally in New York on her third birthday must have a Kiddie-Kar. The children have pictures (twenty to thirty minutes by electric light with Brownie) of every Christmas Tree we have had since Son was one year old.

Our films are carefully preserved in a safe deposit box, so that, should fire consume the prints in the albums, we still have recourse to the making of duplicates.

To all parents, especially young ones, before it is too late, the Only GIRL says to other mothers who have the BEST CHILD IN THE WORLD, "Which would you rather have, Memories or Pictures?" The elongated pronoun answers, "Both!"

A Talk on Winter Photography

By A. H. Goud,
Cumberland Mills, Maine

There seems to be two kinds of photography. Summer photography is practised by nearly everyone who owns any form of a camera, while winter photography seems to attract only the most enthusiastic of amateur photographers. By calling upon what experience I have had I shall endeavor to throw a little light on the subject, hoping that someone may be inspired to make an attempt at this fascinating branch of our very interesting hobby—photography.

Let me say at the start that a good pair of snowshoes is almost a necessity if your subjects are going to lead you from the road. I have used rubber boots several times, and found it to be very strenuous work to wade across fields where snow lies knee deep, so I gave them up in favor of snowshoes. Almost any kind of a camera can be used, although I prefer one that takes plates. On account of the various and trying conditions of lighting, I use the Standard Orthonon plates.

The exposure proposition in winter photography, according to my own observations, is no more difficult than in the summer; in fact, I find that some of the exposures I took recently were given the same exposure which the same subject would receive in summer.

I have found that sunshine is very essential to make good snow pictures. On a dull day the only subjects that can be photographed at all successfully are trees that are laden with snow, provided you can get them against a dark-colored background. When you are working with sunshine, the best effects are obtained from a side lighting, or by having the sun nearly in front of the lens. Therefore, a lens shade will come in handy, and can be cut from a mailing tube of the right diameter to fit the lens. This shade should be cut about three-quarters of an inch long, and can be carried inside the camera when it is folded up. In case the sun is so low that it shines into the lens when the shade is in place, there are many instances when you may get behind a tree, letting its shadow fall across the lens. Always carry an exposure meter with you, preferably one that will give you the result quickly, thus lessening the danger of freezing your fingers.

A TALK ON WINTER PHOTOGRAPHY

It is a peculiar fact that, in photographing snow scenes which include trees, you are pretty sure to either lose the detail in the trees or the gradations of light on the snow. The only known remedy for this is to give a full exposure, develop in a dilute solution until it can be developed out no longer, then print on a soft grade of paper.

My favorite developer for either films or plates is made up in small quantities for use in trays, from the Eastman tank formula, as given below:

Taken in Maine, December, 1922, with Premo camera, Wollensak F 6.3 lens, exposure in faint sunlight, 1-25th second at F 11, on Standard Orthonon plate, developed in Hydro-Pyro-Elon. Print made on regular Velvet Velox.

Water	32 oz.
Sodium Sulphite	1¼ oz.
Potassium Metabisulphite or Sodium Bisulphite	15 gr.
Elon	10 gr.
Hydrochinon	40 gr.
Sodium Carbonate	300 gr.
Pyro	100 gr.
Potassium Bromide	6 gr.

This is a full-strength solution, and needs dilution only when developing double-coated plates, although better results may be had by diluting slightly for any brand of films or plates. The solution will keep well for more than a month if it is kept in eight-ounce bottles, filled to the top, and the cork inserted so as to leave no air in the bottle.

When developing snow scenes, they usually come quickly, similar to a summer scene that has been over-exposed, and there is a great tendency to remove them from the developer too soon. A very simple test to determine if development is complete is to look at the reverse side of the film or plate. When the detail begins to show through clearly on this side, the development is complete. A little experience in this method will remove all the uncertainty from your developing.

The choice of printing paper is quite important, and is sometimes difficult to make. You may have a negative that looks like average density, yet when you make the print on average paper, or medium grade, the snow looks muddy in color, and you will find that the contrast grade is just the thing. This only goes to show that you cannot look at a negative as a whole, and decide whether it is average density or not—you must scrutinize each part of the negative carefully, decide which part you want to bring out the detail and gradation from, and then select the grade of paper best suited to that part.

Moral: Hereafter, when we feel the urge of the old-time camera enthusiasm coming in mid-winter, let us not hitch our chair up to the radiator, but let us dig out our camera and snowshoes, and strike out to secure scenes of Nature in her most beautiful array.

WINTER IS OVER

Photography and Fretwork

By Edgar Felloes

Many boys, and doubtless some girls, have devoted spare time to fret-cutting. For this work, perhaps, they have availed themselves of the stock patterns purchased from the dealers. Would it not be more interesting if we made our own patterns and did the work from first to last ourselves? In these days when the world is full of amateur photographers, I should not be a bit surprised if there was a camera in your own home, so it will not be necessary to consider that part of the outfit. Also, some of our many readers may already own a fret-saw; perhaps it has been hidden in the attic a long time. It costs very little, however, to buy one of the hand type, or if one can secure a small foot-powered machine, so much the better, as it will leave both hands free to manipulate the work. But this is not absolutely necessary; the little hand frame will do the work very well.

DECORATIVE TREATMENT IS DESIRABLE

You must understand that to get our original patterns we have to make photographic silhouettes; the work is interesting and not really difficult. The pictures used to illustrate this article were cut in chestnut wood about a quarter of an inch thick, and it was later stained a very dark brown color, which adds to its appearance. Chestnut, cut especially for this purpose, may be had from those hardware stores that cater to this trade; it is a very pleasant wood to work upon and not likely to split.

We will now consider the making of a silhouette. For our first attempt, let us undertake something simple—a spray of leaves, for instance. First, we shall need the four sides of a small packing case; by this I mean a case with the top and bottom removed. A convenient size would be about two feet long by one

foot wide and one and a half feet deep. Over one opening of this box tack a piece of white sheeting tightly. Now we need a spray of ivy, Virginia creeper, or anything of that sort. Tack this on the outside of the box in front of the sheeting and touching it. Place the box on end and allow the spray to hang down gracefully and naturally. Inside the box you should place an electric light or use any other suitable illumination, and now darken the room. The light in our box will now show a good silhouette, and that is what we must photograph. You will notice how this kind of photography lends itself to work in the evenings, as all the light we need for the actual exposure is supplied by the illuminant in the box. It will only take a moment to throw a newspaper over the back of the box to confine most of the light straying from that quarter, as it is better not to have it srike the lens.

The next thing to do is to set up the tripod with your camera opposite the spray of leaves, and if your camera has a focusing screen, focus the leaves as sharp as you can. In the event of your camera not having a ground glass, set the pointer on your camera to the smallest number of feet indicated on your focusing scale—let us say that is five feet. We should then measure five feet from the camera to the leaves. Do not guess this but measure carefully. Where one has a portrait attachment to fit over the lens, use that according to directions; it will make our picture larger; this will be found an advantage. All that now remains is to make the exposure. I cannot direct you with regard to this, not knowing the strength of light used, but for the first experiment we might try the following: Make the exposure with stop F.16, and give time one second; then expose again on a fresh film, giving two seconds exposure, but with the same stop; then take your two exposures and have a trade finisher develop them for you. He will tell you which is the better negative, and you will be in a position to time for yourself with certainty in the future.

We will suppose for your second attempt you wish to make a portrait of one of the family. Here are two ways of doing so. The simplest, perhaps, is by daylight. Choose a bright day. Hang a white sheet before an open door, smoothly. Now sit your subject before the sheet within the room with the face turned in a perfect profile. Having focused the model, draw down the shades to darken the room and make the exposure. If you use stop F 16, you will probably find an exposure of half a second sufficient. The second way to accomplish the same thing is by working at night.

This time you must hang the sheet in a doorway between two rooms, and you will need someone to help with the exposure. At the stock house you should purchase a packet of Eastman's flash sheets and use them according to directions. Sit your model before the sheet, and while you operate your camera on the same side as the model, signal to your assistant to light the flash sheet on the other side of the screen and this will give you the desired result.

The next stage of the game—I think we can call it that—is to take our negatives to the finisher and have him make the bromide enlargement

Silhouettes of this character may be made in the evening, out of doors, by pointing the lens at the sun. A quick exposure will arrest action and secure the desired effect. This decorative effect is very pleasing.

necessary. Be sure and tell him the enlargement must be on thin paper, and, of course, it must not be mounted. The reason the enlargements are necessary is because of the small size of the camera; it would be very difficult to cut frets to such a diminutive scale. Where one has the outfit and understands the work he would naturally make his own enlargements.

With regard to portraits, it would be better at first to confine oneself to bust pictures, and have the head enlarged to the size of a fifty-cent piece, or even larger; this size will enable the worker to cut around the features with little difficulty.

Having secured the enlargement, trim off superfluous margin, and with a stiff paste attach the picture to a piece of the wood you intend to cut. Paste every part of your design down smoothly and set it aside to dry. When dry, draw a panel around your picture to give it a finish, and then proceed to cut out your fret according to your experience or the directions you will get when purchasing an outfit. Remove the paper by damping it when the work is done.

There are many uses for fret-cut pictures in a decorative way. They may be made to ornament the tops of glove and other small boxes by using pleated silk or wood of another shade as a background.

Deer in Mid-Winter

By W. Wynne Bolton, B. A.
So. Easton, Mass.

One day after an especially heavy fall of snow, and the trees were heavy laden, I started out to get a few snow scenes. In a mass of pines, with a wagon road running through them, I set up my camera. After selecting what I thought was a pretty bit of the snow scene, showing several trees heavily laden with snow, I reached for my bulb. As I did so, two deer, a doe and a fawn, leaped lightly into the foreground about thirty feet away. The second that they landed I snapped them—they were gone, not stopping to look behind them.

You can see from the picture that the doe saw me, and that the fawn heard something. You can well imagine my joy when upon development of this plate I found a splendid picture of the two deer, and the pose was as good as one could wish, for the position was natural.

AN UNUSUAL SNAPSHOT
(Copyrighted by W. Wynne Bolton)

I sold $35 of photos in black and white and colored from this negative. I have the picture copyright, but will be glad to give you permission to use it with article.

I have an oil of this photo that has been on exhibition in Brockton, Mass. It is in a deep gold frame, and 10 x 14 inches size of canvas. It would be a dandy for a den, or, in fact, dining room or living room. It has been considered a fine piece of work by a number of artists that saw it while on exhibition.

The camera has become a great assistance to the painter. It frequently is what the sketch-book used to be.

PUBLIC LIBRARY

THE CHOIR-BOY

Design in Background Effects

By Fred Telfer,
Wiarton, Ont., Canada

For some years I have been dissatisfied with the "print in" designs used as backgrounds for Confirmation and Choir-Boy pictures, and decided to make some of my own.

The architecture of a fine Gothic window being very beautiful in itself, I wondered if it would be possible for me to make a print in background of an elaborate design that would be absolutely correct in every way.

I borrowed a fine book of architectural designs, and decided to reproduce a stone window there illustrated. I photographed this and made a contrasting negative of it, and from this an Azo hard X. E. print, which gave the lines very sharp and of outstanding darkness. Next I cut away the part of the window I wished to use, and pasted it on the upper right-hand corner of a smooth piece of black paper, size 8 x 10 inches. When this was dry and made flat I proceeded to paint the white spaces between the mullions with an opaque mixture to match the black paper. Then I photographed the whole, being careful not to over-expose, keeping the main part of the negative as clear and transparent as possible while I developed the design to a suitable strength.

At the retouching desk, I outlined the architecture still stronger. In printing, the diffusion can be regulated by thickness of glasses between the background and the portrait negative. This choir-boy print shows a portion of a window in St. Mary's Church, Nottingham, England, a faultless outline of English perpendicular Gothic.

Note.—The print from which this cut was made was toned a sepia color, and the architectural background, showing in a yellowish shade, did not reproduce well. A black and white print would have given better results.

Our Frontispiece

The frontispiece for this month, the work of P. Douglas Anderson, is of considerable interest. It shows how an artist photographer is able to handle a subject made up principally of perpendicular lines, and by availing himself of the light and a suitable hour of the day, to make use of cast shadows to add to his composition by breaking up this perpendicular monotony.

In the middle distance we note and appreciate the diagonal cast shadow; it is not black but transparent, and has an atmospheric value. The foreground, too, has an invaluable cast shadow; note how this gives a base which supports the buildings above it. Furthermore, this shadow carries the color of the dark building on the right well across the picture plane. Were it not for this, our composition would be divided in half, a dark and a light half, and this would give the work a most undesirable mechanical look.

To the thousands of photographers who fancy all they need do is to get before a subject and shoot, we commend a moment's study of this picture. Nothing has been done to it by way of faking; it is a true transcript of nature, a true photograph in the best sense, and yet it is as different from the average view as chalk is from cheese. We ask the novice to notice that though this print is a salon picture it is far from being a fuzzygraph.—E. F.

II. Bromoil and Bromoil Transfer

By Chris J. Symes

"British Journal of Photography"

To heighten local lights a small, soft, pointed rubber may be used or a small clean brush will remove the ink if lightly hopped or bounced on the print. Hairs from the brush, bits of grit, etc., on the print should not be moved until the ink is dry, which will be in about two or three days. They may then be rubbed off or lifted with a sharp knife. High-lights may then be cleaned up with a soft rubber and spots removed. It is safer and easier to leave anything in the nature of retouching till the print is thoroughly dry.

The beginner should, however, aim first of all at producing an exact replica of the bromide print, for until he can do this he is hardly in a position to use control—he is controlled by the process, and although he may fluke an effective result, he will never know how he produced it nor will he be able to repeat.

It should be realized that this process depends upon two very unstable factors—gelatine and a chromic salt. My knowledge of chemistry is elementary, but I am informed that gelatine is still a subject for research, and until its properties are definitely established the process must remain uncertain. I can, therefore, only mention some of the difficulties I have met and overcome, and where I think I have been able to trace a cause, it is quite possible that chemists may point to other things which may give the same result or dispute my conclusions in entirety. As far as actual practice is concerned, however, I may say that I have proved all my remedies to my own satisfaction, and where I assume a cause, whilst it may be open to argument, the remedy I put forward has been effective, although it may act in a different manner to that which I imagine.

It should particularly be mentioned that in tracing faults or experimenting only one alteration should be made at a time, for it is obvious that if two things are tried it is impossible to say which is responsible for the difference.

The first difficulty that is usually met with is a refusal of the ink to take. Over-soaking, soaking-in and the use of solutions at too high a temperature, too large a proportion of bichromate in the bleacher, too hard an ink, moisture on the surface of the print, too lengthy bleaching, insufficient bleaching, and the omission to swab the print before inking will all cause this condition, and to deal with each in order: Over-soaking and soaking at too high a temperature (both amount to the same thing) are indicated by an excessive relief, occasionally by blisters and sometimes, but very seldom, by the gelatine in the high-lights, reticulating or coming off in little bits. Except in the latter case, there are two remedies—one is to dry

and re-soak either at a lower temperature for the same time, or at the same temperature for a shorter time. The second is to let down or dilute the ink. The former is preferable, as there is less risk of getting the print oversoaked.

If the ink takes a little but will not give sufficient depth the ink is too hard and should be let down, little by little, till it will just take sufficiently. If there is too much bichromate in the bleacher, the print acts in much the same way as if over-soaked, but with these differences. If the ink be thinned so that it will take there will be no gradation in the shadows or high-lights, the ink will not stay on the print with repeated brushwork, and where it does it will be grainy in texture and poor in color. There is no remedy. A similar state of things, though not so bad, is produced by leaving the print in the bleacher too long, but in most cases longer soaking will do much towards giving a passable print.

Too little bichromate is shown by a general reluctance to ink; if it takes at all it is patchy and easily removed, and there is no gradation anywhere except perhaps in the lighter portions of the print and it may not show there. A print in this condition is hopeless, though if it is not very much at fault thinner ink may produce a result.

If one forgets to swab the print it may be cleaned with petrol on cotton wool, dried, and re-soaked, but wherever petrol is used on a print, care should be taken to see that it has all evaporated before wetting the print again or a very muddy print will result.

It also happens that, instead of the ink refusing to take, it takes all over—on shadows and high-lights alike. This is most likely due to insufficient soaking or soaking at too low a temperature, but may be due to a too soft ink, too little time or too much in the bleaching solution, and to the use of stale paper.

If it is due to incomplete soaking or the temperature is too low—indicated by a lack of relief—clean with petrol and re-soak as above at a higher temperature for the same time or a longer time at the same temperature.

It is not very often that a print that has been too long in the bleacher takes ink indiscriminately, but if it does occur it may be deduced from the fact that while the whole print is too dark in tone, the quality is good except in the high-lights, where the color of the ink is poor, and if a black ink has been used, the lights will be brownish instead of grey. The lights, too, will take ink more readily than the shadows, giving what is known as partial reversal. This may be overcome by continued inking. Reversal itself is dealt with further on. There is no real remedy, but a longer soaking may give a lighter print.

Where the print is under-bleached, it usually takes the ink lightly, without regard to the image except in the lighter parts, and there it may not take at all, and is easily removed by continued dabbing as beforementioned.

(Continued on Page 126)

UPPER YOSEMITE FALLS
By H. S. Lawton

The above picture is interesting from the fact that it is the fragment of a view taken on a 5 x 7 negative. This portion of the picture measures about 2 inches square, and the photographer projected an 8 x 10 print from it. From this print our engraving was made.

This view was made from the floor of the valley one mile distant, with a 2B Tessar, 8¼-inch focus. A K3 filter was used, and the exposure time was half a second with stop F. 16 at 10 a. m., on Commercial Ortho film.

We here have an excellent example of what may be done by enlarging a desirable portion of our negative. Beginners are prone to approach their object too closely with the intent of securing a larger image. We have constantly warned readers against this practice; it is sure to lead to distortion and frequently is a bid for an under-timed negative. By keeping at a distance from our object, we have more light between ourselves and that object; this insures better exposure.—E. F.

(Continued from Page 124

Too soft an ink is shown by the image being too dark all over with dirty lights and clogged-up shadows. The ink is difficult to remove by brushwork, and the whole thing has a muddy appearance. The print may be cleaned with petrol and resoaked, a harder ink being used.

Stale paper sometimes both refuses to take or takes all over; in either case nothing can be done.

Reversal or partial reversal is a curious phenomenon that is sometimes met with, and no one appears to know how it arises. It can be cured, generally, by a thorough cleaning with petrol, drying, and resoaking, and sometimes persistent inking will gradually remove it.

I have found definitely that it is due (1) to a stale bichromate solution being used, or (2) to the bromide prints not being thoroughly washed, and to (3) hypo and developer contamination, and also (4) to too great a proportion of potassium bichromate.

There may be other things which may cause reversal, but I have not been able to establish them definitely. Some fellow-workers have mentiond that they suspect working in a warm room during inking, but I have never been able to prove this, and think it more probable that one of the causes above-mentioned is responsible.

It is obvious from the foregoing that perfect cleanliness in working is essential, and the faults I have given indicate of themselves what precautions to take to do away with the nuisance of reversal.

A Bromoil sometimes works up well, but the image is grainy and composed of minute dots that will not coalesce. This is generally due to a dirty brush or one with too much ink on it. The ink may be unsuitable, but as long as it is of the makes above mentioned it is very unlikely indeed.

Patches which ink up irregularly are sometimes noticed, and these may be due to several causes. If they are circular or semi-circular in shape, they are most likely due to air bubbles in the first fixing, during bleaching or soaking. There is no remedy except retouching the finished print when dry, so care should be taken to use plenty of the various solutions and to see that the prints are always kept moving and under the surface.

If they are irregular in shape and lighter than their surroundings, they may be caused by the print not being covered in an even sweep in developing or bleaching; if they are darker than the rest of the print, they may be the result of soaking too many prints at a time, of sticking together in one or other of the baths, or possibly the victims of such a silly practice as pouring hot water into a dish containing prints in order to raise the temperature. In this case some of the hot water is bound to reach the prints without being cooled by the water already contained, and markings are obviously inevitable.

Temperature should always be adjusted before the prints are put in, and the dish well rocked before and after insertion. Marks may also be

(Continued on Page 128)

COMMERCIAL PHOTOGRAPHERS' ASSOCIATION
Los Angeles, California, January 19th, 1923

The Commercial Photographers' Association of Southern California, taken at one of their regular meetings, with Mr. Ralph Young, of Lothers & Young, San Francisco, as the guest of honor. The membership represents over thirty commercial photographic concerns in Los Angeles. Photo shows Eugene Swarzwald, Keystone Photo Service, President; M. L. Bailey, Bailey Studios, Vice-President; P. H. Meriman, Meriman Photo Art Co., Secretary; A. Putnam, Putnam Studios, Treasurer; Dan P. Watts, Watts Studios, second Vice-President. The others are: G. A. Fowler, Wm. Graham, W. A. Hughes, E. T. Merchant, J. H. Mott, P. Gillette, N. Moss, M. F. Weaver, A. R. Hromatka, Carl W. Swearingen, W. L. Cross, B. A. Bone, Stanley M. Langdon, Joseph Shipman, Geo. F. Clifton, T. C. Thompson, Geo. F. Adair, T. J. Galligan, J. C. Milligan, R. M. Stagg, F. H. Skinner, R. W. Huddleston, T. H. Brown, W. H. White, H. R. Davis, A. L. Decker, C. Watts, B. S. Ansley, Edward S. Curtis.

(Continued from Page 126)

caused by insufficient bleaching, incomplete first fixing, not enough soaking or washing. The symptoms and remedies have been mentioned above.

Very occasionally a print will refuse to bleach, and the most likely cause is the presence of hypo in the emulsion, or the use of acid hypo in the first fixing, or the paper may be utterly unsuitable. The bleacher may be exhausted, and in the latter case only is there any hope of making a decent print. It should be removed from the dish and placed in running water till the yellow stain has gone, and should then be placed in fresh bleacher, proceeding afterwards as usual.

Other irregular markings are due to such things as touching or rubbing the surface of the print with the fingers during any of the operations, and abrasions due to improper handling, such as pulling out of a dish by one corner or grazing them on the edge of the dish in removing from dishes or tanks.

This process is a charming and elusive one; it is difficult, but the results, even if uncertain, are of such a quality that no other process can equal. It is not a process for the novice, and until a worker is able to turn out bromide prints of quality with absolute certainty, it is no use thinking of Bromoil, for whilst it requires a considerable amount of technique to produce a good bromide, it is nothing to that that is necessary to make a good Bromoil. Similarly, Bromoil must be mastered before proceeding to transfer.

Transfer is a process that is based on Bromoil. Up to the point of inking the procedure is similar, but thereafter there are differences.

Both bromide and Bromoil may be stronger in contrast as the print eventually produced is softer than the Bromoil.

In quality the result resembles an etching, which is not surprising when one considers that the paper and inks employed are identical, and, in addition, it has the advantage over etchings in the rendering of gradation and in the faithful depiction of half-tones, usually lacking even in the best of etchings.

Bromide papers suitable are:—

Kodak "Velvet."
Barnet "Smooth Ordinary."
Barnet "Semi-Matt Card."
Kodak "Royal."

The time of soaking and the temperature have been given above in the Bromoil section, and are calculated so as to bring the print to such a condition that it will take the ordinary stiff ink used without dilution.

It is important that it should do this, as if the ink is diluted it is reluctant to transfer. The fact that all the ink put on the print nas to come off again must be kept in mind from the beginning. Inking should be as light and rapid as possible. A 15 x 12 print should not take much more than 30 minutes to ink, including faking.

Now, assuming that the print is ready on the glass slab, take a very small amount of pigment on the brush, much less than for Bromoil, and lightly dab it all over in order to see where the lights and shadows are. Ink up the lights first, then the half-tones, and lastly the shadows. The reason for proceeding in this order is that the darks are most reluctant to transfer while the lights and half-tones do so easily. The longer the darks are left before transferring the more difficult it is to transfer them.

Do not work the print to smooth down the ink more than is barely necessary, and leave all faking to the end.

If medium is necessary to thin the ink in order to darken obtrusive lights, it may be sparingly used now. It is advisable that the effect desired should be memorized beforehand and kept in view all the time, so that no time is wasted thinking what to do and how to do it at the end.

Inking being complete, the Bromoil is ready for transfer. My press is an ordinary kitchen mangle—it serves as well as an etching press or the special machines made for the purpose.

Any paper made for etching is usually suitable as long as it is tough enough to hold together when the Bromoil is pulled away from it. It should be fairly thick and absorb water easily, and should not have much, if any, size in its composition. Hand-made papers are usually best.

The transfer paper requires to be in a damp, but not wet, condition when the operation of transfer takes place. At some time previous to inking the Bromoil—an hour is sufficient—take such a number of sheets of transfer paper as are likely to be wanted and soak them for not less than five minutes in water; take them out one by one, allow them to drain a little, and place each between sheets of blotting paper, i.e., put a sheet of blotting on a board, then a sheet of transfer paper, then another piece of blotting, another transfer paper, and so on. In half an hour they will be ready for use, and will remain so for some hours unless the room is unduly warm and dry.

A carrier to take the print and transfer paper should be made ready beforehand. I use a piece of 3-ply wood rather larger than the largest transfer paper used. On this I place one or two pieces of smooth card (simply to make up the thickness and increase the pressure), then the Bromoil, and on top the transfer paper, and over that a piece of printers' blanket and a thin card. The whole is passed through the mangle and afterwards separated.

In detail, after inking is finished, the Bromoil is put on top of the second card of the carrier, is masked with strips of thin paper to give a straight and clean edge, the transfer paper is placed in position on top, over this the piece of printers' blanket, and then a thin piece of card, taking care that everything is quite flat or creases will result. The latter card is only to protect the print from any roughness in the roller.

Now screw up the mangle as far as it will go—it is practically impossible to get too much pressure—and pass the whole sandwich through and

back. Take off the top card and blanket and turn the Bromoil print and transfer over—they will be sticking together—and mark the corners in order to get correct register in case the transfer wants more depth anywhere; lift the Bromoil print by one corner and carefully and slowly peel it from the transfer paper, watching the transfer and Bromoil to see that all the ink has come off the Bromoil. If a small patch is seen to be remaining on the Bromoil, it may be replaced—taking care that it remains in register, the blanket and card put on top, and the whole put through the mangle again. Occasionally it may be necessary to make a pad of folded newspaper to increase the pressure locally where the ink has failed to transfer.

Sometimes it is sufficient to turn the print and paper half-way round and put through again.

Having parted the Bromoil and transfer, the latter should be examined to see if it is strong enough. It is far better to get the right strength with one inking, if possible, but if there is not enough depth in the transfer, the Bromoil may be resoaked in cold water, say for 10 to 20 minutes, and reinked only in those places that require more strength. Put the print in register on the transfer and put through the mangle again. Repeat if necessary, but don't overdo it, as the transfer paper will be drying all the time and the gelatine of the Bromoil will probably get tacky, in which condition it will pull off the surface of the transfer paper.

If another transfer is required, the Bromoil may be cleaned with petrol, dried ,and resoaked as before mentioned, reinked and retransferred.

This may be repeated till the surface of the Bromoil gives out; it is possible to get as many as six or seven transfers from the one bromide print, but the quality deteriorates rapidly after the second. Retouching may be done to almost any extent when the transfer is dry. Carbon pencils, Bromoil ink diluted with paraffin, water colors, chalks, india-rubber, and a sharp knife may be used as the skill and fancy of the operator directs.

Care is essential throughout, but both these processes are so absorbing that once success has been achieved it is most rare that any worker deserts them for other processes, and if this article is the means of helping any fellow-pictorialist, it will have served its purpose and fulfilled the intention of the writer.

(Concluded)

STICK TO YOUR JOB

By MINNIE RICHARD SMITH

Diamonds are only chunks of coal, that stuck to their job, you see;
If they'd petered out as most of us do, where would the diamonds be?
It isn't the fact of making a start; it's the sticking that counts, I'll say.
It's the fellow that knows not the meaning of fail, but hammers and hammers away.
Whenever you think you have come to the end, and you're beaten as bad as can be,
Remember that diamonds are chunks of coal that stuck to their job, you see.

In this photograph, from an advertisement of the Nathan D. Dodge Shoe Company, most of the life lies outside the picture but most of the action is inside. This means that attention is centered on the products advertised, which are given human interest by what is suggested rather than shown

How Much Should the Advertising Photograph Show?

By Wilbur Perry

By Courtesy of "Printer's Ink Monthly," New York

When a picture of your product by itself is shown in your advertising you are apt to feel a sense of disappointment. This is due largely to the fact that there is no personality present. The product stands alone, unsupported by certain factors that could give it life.

With the growth of photography as a medium of showing products with absolute accuracy, there has come an interesting development, closely allied to the desire for accuracy. Advertisers found that while a photograph did show the product as it actually was it gave no more life than other methods. Gradually they tried experiments that would tend to develop interest in pictures that otherwise would be uninteresting to the prospect.

No one needs to see the rest of the woman to realize that this Napier mesh bag is a desirable possession of beauty

Figures were introduced, situations were dramatized until they culminated in such series as those of the Grinnell Company, Inc., where the story of the need of sprinkler protection is told in a number of photographs of great dramatic interest. But even this did not greatly help the advertiser who was selling a laundry machine or a mesh bag.

He had the choice of showing his product alone, without any human interest; of showing it in a photograph that told a story, thus turning the interest from the product to the story; or of finding some other method which would have the advantage of both of the other plans and perhaps none of their disadvantages.

The solution was comparatively simple, and a number of exceedingly effective advertising paragraphs have been the result. The product is given a human interest and yet human interest is not master.

The advertisers of shoes and hosiery were up against the worst situation. If they showed their products alone without any accessories little interest could be aroused. Buyers of shoes and hosiery are interested in shoes and hosiery as they appear when worn, not as thrown out on the counter in a retail store.

On the other hand, to stage a picture that told a story by showing several men or women in some dramatic situation would draw attention away from the product. There is always a great deal of interest in human faces and the reaction of the prospect is liable to be a mental discussion of the beauty or the interest of the people in the picture and of their story rather than of the product.

Some advertisers took care of this by having the actors in the picture display the shoes or the hosiery they were wearing with a great amount of evident satisfaction. But the prospect was prone to feel that refined people do not go about displaying the merits of their hosiery and shoes. This kind of picture has been done effectively, but it requires a great deal of skill.

Human interest focused on the product is possible and is being procured advantageously in a number of advertisements in current magazines and newspapers. In a study of how it is being done any advertiser can find many workable suggestions for application to his own product.

A Griswold Waffle Iron is shown just as it has been unwrapped on Christmas morning. It lies in the tissue wrapping paper and a sprig of holly is beside the handle. Holding the other handle is a woman's hand. In her other hand she has a Christmas card.

That a Griswold Waffle Iron is an excellent Christmas gift is told in a picture from which much of the human element has been removed. And yet human interest plays a big part without distracting attention from the product

The hands are the only parts of the woman that are noticeable to the reader, the rest of her body merging into the background. Yet her presence is felt and the whole picture tells a story. You cannot see her face, but you know the expression that it carries as she looks with pleasure on her Christmas gift.

Notice how skilfully this picture has done its work. The entire attention is centered on the waffle iron and yet the iron has about it a great deal of human interest. It is a part of a story—but it is the main part, not subordinating to the story, but dominating it. Without the presence of the woman it would be merely a Christmas present. With her presence it is interesting and desirable.

A woman's gloved hand, holding a Napier mesh bag, is shown in a recent advertisement. The only part of the arm that is noticeable is cased in a cuff of heavy fur that merges easily into a background of a black velvet coat. The bag is shown against the fur cuff and stands out with remarkable clearness.

Here the advertiser builds an atmosphere of richness with a fur cuff, a white glove, and the suggestion of velvet. This atmosphere is purely accessory, and its sole purpose is to emphasize the mesh bag.

Alone, the bag would have been just a bag with no individuality. There would have been no suggestion of value or of the class of woman who uses it. With a few simple strokes the advertiser has given the bag a back-

ground of luxury and has suggested its desirability. All this is done so that the entire attention is focused on the product.

A photograph from "Fashions of the Hour," published by Marshall Field & Company. It shows how an effective advertisement for shoes can be built by the elimination of detail and the concentration of attention on the product

"Fashions of the Hour" is a magazine issued by Marshall Field & Company to reflect current fashions as exemplified in the merchandise in the Field store. It always has in it a number of effective photographs that apply the principle of building up interest around a product without sacrificing the product's individuality.

In a recent issue a page was devoted to shoes. In no case was the shoe shown on an entire human figure. Always the figure was shown only partly, so that the entire attention could be centered on the shoe.

In one picture two women are standing beside a stone balustrade talking, yet their figures are cropped just above the knees. The feet are shown in natural attitudes. The photograph has all the human interest necessary; it tells a story—the story of richness and beauty through suggestion.

The Nathan D. Dodge Shoe Company in a recent advertisement has done the same thing quite as effectively. The scene is a dressing-room where a maid is showing a woman several pairs of shoes. In her hand the maid holds one shoe, and there is another pair on the woman's feet. Scattered about are two more pairs of shoes of different styles. The woman is holding her skirt daintily away from the ankles so that she can admire the shoes that she is wearing and also give her attention to the shoe that is being displayed by the maid.

In this picture the woman is cropped at the shoulders, while the maid is present only through the medium of her hands and a flash of her white apron. In the background the legs of the dressing table show dimly. Here with a very few properties the company has built up a story of refinement and beauty.

In each one of the photographs shown, devices have been used that obviate any feeling of incompleteness. The Napier mesh bag overcomes this by having the arm merge into a shadowy background.

CAMERA CRAFT

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The Passing of Carl Paul Goerz

Carl Paul Goerz, founder and until the time of his death head of the Optische Anstalt C. P. Goerz A. G., of Berlin, died on January 4th, 1923. Thus the German optical industry lost one of its most imposing personalities. Mr. Goerz started in business in 1886 in a single room. From this tiny beginning the Goerz factories have grown to enormous size, and now cover several acres in Berlin-Friedenau and Berlin-Zehlendorf, with branch factories in Cassel, Leipzig, and several other places. At the present time there are over three thousand employees in these factories, making practically everything required in the photographic and scientific field.

The principal products are: Photographic cameras and lenses and the optical glass from which such lenses are made; motion picture film and other roll- and pack-films; dryplates; prism-binoculars and telescopes; scientific instruments; motion picture cameras, projectors and mirror-lamps; automobile lamps from the small motor-cycle lamp to the largest searchlights for ships, harbors and lighthouses.

Mr. C. P. Goerz was 69 years old, and remained to the last the active head of these huge enterprises, highly respected by all who became associated or in business contact with him. He leaves a widow and three children, two sons being actively engaged in the management of the business.

Silhouettes—A Suggestion

After reading Mr. Nelson's instructive article, in which he describes the silhouettes of "The Little Theater of the Hills," we are reminded of the home silhouettes of fifty years ago which gave so much pleasure to us children. In those days the sliding doors between two rooms were pushed aside, and the space was occupied by a white sheet drawn taught, and thus at Christmas time every home could have its own "Little Theatre." On one side of this screen were assembled the actors and oil lamps—there were no electric lights in those days. On the screen's other side sat the aunties and uncles and a host of pop-eyed youngsters from almost everywhere, for it was Christmas.

A grand stock piece was Jack the Giant Killer. The head of the house, who was stage manager, always took the part of the giant, and the "freshest" youngster in the neighborhood was elected to be Jack; by right, he had to be fresh to kill such a big giant. And the giant himself, in the

supreme tussle, had always to remember if one of the oil lamps was upset he might lose his happy home.

There never were such plays as these silhouette pictures supplied. In the fight with the giant we could hear the slash of steel, and how we shouted when the giant was laid low and Jack wiped his dripping blade on the tail of his blouse. "Them was great days."

Can we not combine the silhouettes "of yesterday" and of today, and make them adaptable to home needs with a minimum of cost? We believe we can. Here is our suggestion.

Take your camera on suitable days and make cloud negatives for backgrounds; if trees are sometimes included with these clouds, so much the better. It is the easiest thing in the world to undertime trees when making these negatives, and that is what we need, for these trees are to show in silhouette on the finished slide. The slides may be colored and beautiful effects secured.

The idea we have in mind is to place our lantern in the inner room, let it serve the purpose of the old oil lamps we have mentioned, and then to project the picture on to the screen. The screen itself should be of white sheeting, but not of too heavy a texture, so that the picture will be projected through it. The performers are then to take up their positions close to the screen and do their part; the light from the lantern will be sufficient to cast their well-defined shadows. The silhouetted trees showing in the projected slides will not appear so dense on the screen as the silhouetted figures. This is a great advantage, and should be made the most of.—E. F.

Monthly Meeting and Dinner of the

Photographers' Association of California

Held at the Hotel Bellevue, Monday, February 12th, 1923

At the conclusion of the dinner, Mr. F. A. Webster, President of the Association, in the chair, called upon Mr. Gabriel Moulin for a brief review of the exhibit of pictures on display in the Palm Room of the hotel, which had been obtained from the Commercial Photographers' Association.

Mr. Moulin very carefully and appreciatively discussed the merits of the various pictures, especially referring to the pictorial merit of a large number of what were supposed to be merely "commercial" photographs, and concluded by saying:

"Just as a comment on what our little organization has done for us in this exhibit, I would say that it has given us enough food for much thought, and it certainly has repaid us for the effort in having it brought out here and displayed here. I am glad that there is a large meeting here this evening, and that there is such a fine prospect of the two associations working together so heartily." (Applause.)

President Webster thanked Mr. Moulin for his remarks, and also Mr. Morton for his good work in connection with the exhibit.

After a short recess to look through the exhibit again after Mr. Moulin's comments, the regular business of the Association was taken up, including roll-call, reading of minutes by the Secretary, Mr.

Fellows, as also correspondence received and reports by chairmen of committees. The President appointed a Committee on Prices.

The President: We had a Committee on Ethics, but Dr. Neymann, the chairman, has passed away, I am sorry to say. Mr. Ralph Young was appointed a special committee to visit Los Angeles. He has been there and I believe has a report to make, and when he has done that I would like him to tell us why he is spending so much time and active interest in this Photographic Association; in fact, two-thirds of his time in our business and only one-third in his own business.

Mr. Young gave a very interesting and thorough report on conditions in Los Angeles, speaking very favorably on the attitude of Los Angeles photographers toward the Association. In closing, Mr. Young replied to the President as follows:

"I have not been devoting quite so much time to Association work as Mr. Webster has intimated, but I am devoting all the time that I possibly can to it; but I can assure you that it is for a very selfish reason; it is because I know how it is going to help me and my firm—which is I—and I know that I have proven this very practically during the past three years through our smaller Commercial Association, and this bigger Association is going to do a whole lot more, and I am going to do some of it, and I hope you will all do the same." (Applause.)

The President: The Board of Directors has decided that we form a collection of photographs, not more than four from each individual member of the Association, either portraits or commercial or whatever line you are in, and make that the nucleus for an exhibit to be shown here one month from tonight. After which that exhibit will be free to circulate among the various communities that desire to have it. If you would respond to a call for photographs for such an exhibit, the Director will go ahead and we shall solicit from any California photographer who is willing to respond to this appeal.

The President then called upon the speaker of the evening, as follows:

"We have living in Oakland—perhaps I should not say Oakland; I think the man is big enough for me to say the San Francisco Bay Regions—a man whose pleasure has been in photography. I think he has all the formulas that were ever written for photographic use, all the chemicals ever manufactured for photographic use, and all the papers and plates that were ever manufactured. And he, perhaps, knows more about the chemistry of photography than any man here, and is probably the equal of any man in the world. He is a modest man also. And he writes for the periodicals. Therefore, I would say that he is quite qualified to discuss this problem of the Ethics for Photographers. Mr. Sigismund Blumann."

Mr. Blumann: Mr. President, Ladies and Gentlemen: I am here as an invited guest, but I cannot feel that way; I feel quite at home, just as one of you. It is true I have written about photography and photographers, but I do not know quite so much as Mr. Webster might lead you to believe. We have a chemical engineer here tonight, for one thing, and I have learned considerable from him in five minutes' conversation. I do know something about photography and a lot about photographers. I even interviewed Mr. Webster himself on one occasion. He met me with a very worried face till I told him that I had come up to interview him. "Oh," he said, "I thought you were here to have your picture taken!" "No," said I, "you cannot always have show-case subjects." (Laughter.) As to the present occasion, he told me a few weeks ago I was to come up here and address you, and that the subject was to be "Ethics." I told him that there were other things that I would prefer to talk to you about. "All right," said he; "talk about anything you want, but make it Ethics." So I understood that he meant that the subject was to be "Ethics." I don't like the subject; I don't like the word. There was a time when men, irrespective of their creeds or religions, had certain Divine laws that kept them in their places, and their faith enabled them to act straight and be square with one another. When the races became more numerous and drifted apart, and

were not able to carry their religions over from Sunday to the rest of the week, they needed something more to keep them straight. Individually most of us are honest, but collectively we are a fine bunch of rascals. I am not a pessimist. I am optimistic enough to look Truth straight in the face and believe it can be bettered. There is nothing but what can be better than it is. We make laws that we would never think of breaking, that we never think of at all. We make them for criminals, and they do not touch us. There are men who would not hold another up and take anything out of his pocket, who would willingly take away his reputation and living and pilfer his general welfare; and we ought to have laws to prevent that, and so we have. Those laws are called Ethics. Ethics must exist and so need be respected. There is not a profession—and I speak of a profession as apart from business lines, because there is something more tangible in a purely commercial concern that deals in intrinsic values—there is not a profession but what is personal, temperamental, something ethereal; and in a profession you have more need of Ethics to govern than has a purely commercial concern.

Before going further I would say that no one could possibly know your needs better than yourselves. You must formulate your code from your needs. Twenty-five years ago the music publishers used to popularize their issues by hiring singers, and one publisher began by giving a gold-headed umbrella, or an overcoat, or a silk hat; and another one would over-bid him by giving away diamond rings and checks; and, what with the overhead and other expenses, it came to pass that there was no profit. Something had to be done. So they made a gentlemen's agreement that it was all to stop, and many forgot to be gentlemen and did not stop. Then they formed an association to enforce the laws and save them from bankruptcy. They hired an able, strong-willed despot to save them from themselves.

The moving picture industry woke up over night to find it was making millions. Some performers were being paid a thousand dollars a week, some two thousand, some more. And one company would bid away the best performer or producer or operator from another till the bidding grew beyond all bounds and consumed all the velvet.

Wall Street took hold and promptly formed an association, and putting Mr. Will Hayes in charge, announced that he was there to clean up the moral atmosphere—as though Wall Street cared anything about the moral atmosphere. It was simply a matter of dollars and cents, and we may as well accept that fact. Mr. Hayes was meant to function, and did function, as a paid and accepted despot, who ruled an industry that those interested in it might not ruin it and themselves. The silver dollar is simply a silver medal—I have said this before and I am going to say it again—the silver dollar if earned is a silver medal awarded for service, and a gold piece is a gold medal awarded for service; and you have got to get together to give one another the opportunity and the privilege of earning it honestly, so that it may be a medal and not filth. There is no man in any profession who has enough temperament and moral stamina to be a professional, who would not prefer being honest. But sometimes there is the temptation to do something to make the immediate dollar. I am willing to believe, and we may confess to ourselves this, too, that there have been times when we have done a thing that we rather had not done, and if there had been ethical laws to keep us from doing it, or if our competitors had been kept from doing it by an ethical law, should have refrained. How much better that might have been. So men get together and formulate these codes to render themselves able to be as good as they want to be—to act rightly by making the right free from loss. It is not only a matter of restraint, but it is a matter of establishing a condition. It is not only a matter of wanting to do the right thing, but of doing right, and for that purpose you must have an association.

The music-publishing business represents forty million dollars a year; the motion picture industry represents billions of dollars a year. What a force, what a

momentum! For money in that quantity has a force that carries it beyond the diffused wills of many men and requires some central power to keep it moving along straight lines. Such large concerns require an individual to rule and direct, but all you have to do is to create a code of ethics and live up to that code. In such an Association as yours, the one need is to get together and formulate a code based upon your own particular needs—a code which will keep you going right, not only for your own sake but for one another's. Each of you will rise in proportion as the whole rises. If a law were to be broken, you may ask, "What shall we do?" Provide penalties. In the course of time you will be able to institute penalties of money fines. But there are other more effective penalties which will occur to you. First, put your Association on so high a plane that it will carry with it the honor of membership. This may be a far cry and may sound like pure idealism. To be able to put in your show case a certificate showing that you are a member of this Association will presently be a high honor. We work along commercial lines in these days; it is an honor to be a member of the United States Chamber of Commerce, because we feel that it carries something with it. It is a national association; we also like to put up our local Chamber of Commerce certificate. We buy our own frames nowadays; the Association used to give us frame and all. But we buy the frame and put it up because of the prestige that goes with it and because that prestige is based on larger and deeper interest in the general good. A man who can give of his time, talent, and substance to public welfare is by that much bigger and better.

If your Association can, through its code of Ethics, establish a standard of membership (not necessarily refusing a man because he is a weak member—taking him in might make him strong) the time will come when a man will be ashamed and afraid to be left out or put out, and the membership that you will have will be too great, too numerous, for anyone inside or outside of your body to put anything over on you. You will be able to carry a force so great that your solicitations will be met more than half-way. It will be quite impossible for a man to refuse to join. Perhaps some men consider themselves so well entrenched behind a fashionable clientele that they cannot see what any association can do for them. Be 99 per cent strong, and those men will belong to your Association. Get strength, and you will be surprised to see how everyone will come under your wing. The self-constituted aristocrat will find you out and you will not be required to go after him. Let each within himself be constituted a better photographer and a better man. I am talking straight to you; I am not preaching. I am talking now of your relations with your customers and your ability to get and hold them. I am thinking of your attitude toward one another and your talk of one another.

In which connection it may be pertinent to say that you can create no higher opinion of yourself than that which you strive to establish for a competitor by praising him. Nothing can get you so great a respect. A general effort towards the general good; esteem for one another in order that the public at large may grant you esteem; high standards—these are the things to emblazon on your banner and such the banner under which you are to march. The good of all this will revert to you. The causes that rendered ethics necessary make it natural that the effects of abiding by ethics shall better your conditions. It is not a matter of pure idealism but of dollars and cents. Your conscience and your pockets become nearly related. Now, if you expected to hear anything more definite it will not be from me. I do not pretend to know enough of the practices of your profession, but I have heard of photographers who honor one another's coupons, but that, of course, could not happen here; and of photographers who offer to do for nothing that for which another has been paid, but this was in a remote place, far from here. The man with a tight shoe knows where it pinches, and it is up to him to complain. Listen to the voices amongst your own number and you will soon learn what needs adjustment. Let us consider com-

petition. This bugaboo of weak members. There is no danger in competition. It has always increased business when legitimate. The piano dealers in an Eastern city found business getting worse and worse, so a genius among them proposed that they all locate on one street and as nearly as possible in one block. Sales jumped up when this was done. A prospective customer going out of one store and into the other never got out of the district without being landed. If there were a photograph gallery in every block or a half-dozen to the block, the citizens would never get home without giving an order to one place or another. It partakes of the force of reiteration, as in the case of the piano dealers. The good will come of just this fact, that there are so many doors open, so many exhibits tempting.

Competition, to repeat, is good and wholesome, but ethics must govern the form of competition. Compete on merit, on service, not on prices. You may not get together and fix a minimum price, as it is against the law, and I would not advise you to go against the laws of the country, but it does seem that it might be made so obviously immoral, so uncomfortable for any among you to bid below a profitable price, that few would dare to do it. I may say that price figures with the public at large, for they are not supposed to know the tricks of your trade, and are likely to go where they can deal to the best advantage, or the worst, on a basis of dollars and cents. But if the five-dollar-a-dozen man begins cutting to three, as sure as fate the fifty-dollar men will have to come to forty dollars. Be not too puffed up with your success, you artists, for the general tone of a profession comes to affect both high and low. Remember that Millet died hungry and Rodin froze to death, and these were as great in their way as you are in yours. Success does not come by the number of customers or the number of exposures you make, but by the merit of your work and the profit it brings you. If you suffer from cut-throat competition, proceed quickly with your ethics and put a good punch back of them. A penalty, as has been said, not necessarily a material one, but an ethical one. It being an honor to belong to your Association, and a deep disgrace to be put out, you have one form of penalty at hand. I am willing to wager that one year of meeting frequently and talking together openly, of making actual efforts to go from good to better in work and prices towards fairer competition, even sending a customer once in a while to one another, would establish a status for professional photography that would make it so high an honor to be a photographer that one would scruple to risk his standing amongst you.

Mason and Hamlin started to make a piano—they had been organ makers. The Steinway piano was so strongly intrenched by established quality and generations of advertising that they could not compete on ordinary bases, so they decided to make a better piano at what was considered a prohibitive price, and so to appeal to a class who could afford and would insist on the very best. When a prospect complained that he could get a Steinway for a hundred dollars less, the reply was, "If you have a price limit, we strongly recommend you to get the Steinway. We are making a piano irrespective of price or comparison, and we cannot compete." Mason and Hamlin pianos are selling strong in the market. I have not the slightest doubt, gentlemen, that in six months, if you persistently stand for the high standards and the best prices, the recalcitrant outsiders will be coming to you to ask to be permitted to join. Meanwhile, do not cease your efforts to increase your number. If you can get sixty per cent of all the photographers, you will find the next ten per cent easily convinced, and the next fifteen per cent more easily still, and when you get ninety per cent strong, the remaining ten per cent will be hanging on to your coat-tails to get in. Numerically strong, morally bound to noble efforts, with rules to keep you right, you will be able to accomplish for your entirety a tremendous good, in which each of you can liberally partake. You will be so strongly bound to your Association that there will be no fear of the enforcement of rules. And speaking of rules, some seem to think that an Association should

begin at that end—the making of rules—but I think the formulation of principles and the careful consideration of needs should come first. This we had better pass up.

A common question, and one that you have had to meet frequently, no doubt, in speaking for your Association, is, "What can I get out of it?" No more can be gotten out of anything than is put into it, and no one has the right to get anything more out of this Association than he helps to put into it. But, as a matter of fact, the good that men do multiplies and reverts with interest to all concerned in it. One of the strongest fraternities in the world is on just this basis. Men join with the admonition that they shall expect nothing and give of the best within them; and on that basis they have done good and kept strong. You will have to give unstintedly of your best efforts, time, thought, perhaps occasionally sacrifice. You will not really have started to govern one another until you voluntarily govern yourselves, and you can hope for no indications of good accruing from your Association till you get down close to the ground and walk sure-footed on a common basis, each man the equal and the fellow of the other, not graded and classified, but just professional photographers with a common interest. Do good work, and do not be afraid to take a profit. Insist on that, and put yourselves in a position to insist on everyone among you doing likewise. Let your relations with one another in the profession be liberal, bolster up, build the profession as a whole.

Mr. Strauss of St. Louis spent the better part of three thousand dollars to establish a broken-down photographer who proved himself a good one in a gallery in the same city, and did not fear the compteition. I have been told that several competitors were financed at the outset by Mr. Strauss. His business is larger than he can handle. He had Mr. Mulgarth, who built one of the great courts at the Exposition and the Mulgarth Tower, travel all the way to St. Louis to design and supervise the building of his fifty thousand dollar studio. Do not be afraid to help one another. Help in a big way, remembering that the twenty-thousand dollar loan is seldom as big a risk as the twenty dollar loan. When you boost the other fellow, and help him to rise, you rise by the same afflatus, and so, as I have tried to convey in a more or less rambling and desultory manner, it is up to you gentlemen to form a coherent body that shall formulate a code of ethics, not comfortably to the measure of your daily needs, but bigger, higher—yes, harder— so that by raising your profession to the highest status you shall find something to climb to, bettering that profession, bettering yourselves, and bettering your conditions. The late Dr. Neymann was Chairman of your Committee on Ethics. I saw him die, and was one of three friends who followed him to the crematory. He was very dear to me, and you have lost a very valuable man, who could have done much on that committee; but you still have that body and have appointed someone in his place, and it behooves you to get busy, formulate definite laws, make them stringent, and obey them. Do not be afraid of infusing ideals into them, for, believe me, the better they are the more you will cash in on them. (Applause.)

The President: I want to thank Mr. Blumann for this very nice talk in opening up the subject. Mr. Blumann, you are welcome here at any time we have a meeting, which will be on the second Monday in every month.

Mr. Lancaster, in proposing a vote of thanks to the speaker of the evening for his able and thoughtful speech, said that he had gained much more than the expense and time he had spent in coming. (Applause.)

Mr. De Gaston, in describing his work, said: My idea is to make a wonderful photograph, a picture that you cannot put a money value on, and when I do that I find that the price takes care of itself.

Mr. Moulin, in commenting on the high ideals presented to us by Mr. Blumann, said: I think that it should be part of the ethics of our Association that we refrain from copying other fellows' portraits. (Applause.)

Mr. Scott told an amusing story on the subject of "Business is Business."

Mr. Petersen spoke eulogistically of the new Association, and hoped that it would grow into a large organization.

Mr. Terkelson, in speaking on the subject of prices, said that his experience was that a fair price gave him just as much business as a low one, and, in corroborating Mr. Blumann's idea that photographers might "get together" literally, said: There are three of us in my block, and I used not to think that the fact of three being in a block was a good idea; but I find that people who look at my place go and look at the next fellow's window, and one of the three of us is surely going to get him.

In reply to a question by the President as to the speculative taking of photographs—

Mr. Blumann said: There is no photographer who can make good photographs on those terms. If everyone got paid for his work, the situation should be just where it was before when all did it for nothing. On the same basis, if you all do it for nothing, it is as if you were all paid, as far as competition figures. Then, why not get paid? (Applause.)

Mr. Love spoke very strongly against the low prices, which took no account of overhead expenses, and exhorted all to stand by their Association.

Mr. Hamlin expressed the opinion that every photographer ought to keep his books in such a way as to know whether he was making a profit or not.

The President: Please remember the exhibit that we are to get up for next month, and let us get a reasonably good exhibit that we can use for circulating. I think it will do us lots of good.

For the Professional

In the Interest of Commercial and Portrait Photographers

P. A. of A. Convention in Washington, D.C. July 16th to 21st, 1923

General approval of photographers in the United States and Canada has followed the action of the Executive Board and officers of the Manufacturers' Bureau of the Photographers' Association of America in selecting Washington, D. C., as the Convention City for 1923, and fixing convention dates from July 16th to 21st, with headquarters in the Washington Hotel.

At the Board meeting in Washington on February 5th many manufacturers and dealers were represented, and most of the Amalgamated Associations in the Eastern territory had delegates in attendance.

The Convention Hall in Washington, D. C., was approved as the meeting place for the 41st Annual Convention of the Association to be held on the above dates. A tentative program was agreed upon, entertainment features were discussed, and, while the details have not yet been worked out, a splendid educational program of great value will be featured, together with sight-seeing tours to interesting points in and around Washington. Representatives from the Chamber of Commerce, Kiwannis, Rotorarians, automobile clubs, and civic bodies in general have volunteered their support in making this Convention one of the best that Washington, D. C., has arranged for in many years.

The local photographers are anxious to make this gathering a success, and have promised their assistance and co-operation to the fullest extent. Everything points to a large and enthusiastic international meeting.

It is now up to the photographers of the United States and Canada to make every effort to plan their vacations with the Convention in mind, and the Board feels that, with the support given in the

past, that it will eclipse all former gatherings held by the P. A. of A.—A. J. Cook, secretary P. A. of A.

To Our Professional Readers

We received the following letter from Brown & Rehbaum, commercial photographers of Milwaukee, Wisconsin, and we are pleased to publish their communication, as it is of interest to professional photographers generally. We shall be glad at any time to print the experiences of professional men in any line likely to be of interest and help to their brother workers.

Perhaps you may have tried something that proved successful—let us hear about it, for the good of the profession.

Perhaps you may have tried an advertising idea or any other idea that looked good to you, but somehow the results "did not pan out"; let us hear of that also. Remember, some valuable ideas have been hidden under mistakes.

We really help ourselves when we help others. We want you to make use of this department and become closer in touch with one another. Tell us what you know.—E. F.

Advertising and the Commercial Photographer

The problem of advertising for the strictly commercial photographer is always a hard one to solve. In most cities there are at different times of the year expositions and shows which are held for the purpose of exhibiting various products that are manufactured. Our firm always makes it a practice to have a neat exhibit ready to set up on short notice. The enclosed photograph shows our method of display at the recent Wisconsin Products Exposition held in Milwaukee.

BROWN & REHBAUM'S EXHIBIT, MILWAUKEE, WISCONSIN

There were exhiibted over two million dollars worth of products manufactured in Wisconsin. At least one-third of these concerns we have done business with, and we find that at these expositions we get in closer contact with our customers, and they more or less visit our booth, and see the different classes of work we are able to produce. This, you must admit, is worth a great deal. You can get underneath the advertising man's hide, which is almost impossible to do when you call upon him at his oiffce.

The exposition was viewed by over one hundred thousand people during the week, and we received many compliments upon the high class of work. We also had in a conspicuous place the original photographs on which we were awarded blue

ribbons at the National Photographers Conventions in Milwaukee, 1920, Buffalo, 1921, Kansas City, 1922. I am passing this on to you, thinking it might be well to tell the boys that we consider this our most effective form of advertising. We also distributed direct to each exhibitor one of our advertising pencils, which we are sending to you.

We try, if possible, to be appointed official photographers, but this cannot always be worked; but if one is on the job with a nice exhibit, the exhibitors who want pictures will find where you are located.

Does it pay? Judge for yourself. We made one hundred and five 8 x 10 negatives of the different booths, which averaged with prints about $6.00, which, besides the six 11 x 14 negatives of general views of the show with prints, brought in $75 extra. Our space and general expense amounted to about $100. So you must admit this is a very clever way to keep our name before the firms that are apt to use commercial photographs.

The Amateur and His Troubles

Conducted by Edgar Felloes

For the Beginner

(Continued from February)

Last month we considered the practicability of buying a good moderate-priced enlarger rather than devoting time in constructing one, and then we took up the matter of getting one's money back from the investment. This suggestion is only for those who are so placed as to make such a course necessary.

I would advise amateurs to be chary of making a practice of using their hobby for monetary gain; one is so apt to kill the hobby by so doing, and then one is poorer than ever. A hobby is something to be treated with respect. A man or woman without a hobby of some kind will at times be quite lonesome.

While a hobby is really a hobby, we are spurred on to real effort; when the edge goes off our hobby our progress lags. We must keep that edge if we possibly can; it is that and that alone that has made the amateur photographer what he is. It has endowed him with that indomitable will to improve, and that is why photography owes its progress mainly to the amateur. The reader will doubtless understand that by the term amateur I do not mean novice; yet the novice is absolutely necessary, for in him lies the hope for the future.

We will now turn to the subject of making enlargements. What I am to say is not new by any means, but it is necessary to stress certain points upon which a good enlargement depends.

The ideal negative for enlargement is one that has received sufficient exposure to make it possible for the developer to produce a picture that has "quality." By this word quality is meant that the negative should have sufficient density all over, that when the lights are sufficiently exposed in making our bromide, the shadows are not "burned up" or over done. As soon as a shadow is over-exposed, it loses its brilliancy on development; it will then appear sooty or of a brownish shade. You will understand then that between the lights and darks of our negative there should be a certain range of steps or tones so as to come within the possible range of our paper. Remember this: It is the exposure of the negative that determines our "color," though many photographers think it is our developer. I get several letters from readers during the year asking me for a formula for developer that will give them a good black in their bromides. A little thought would convince them the trouble was in the negative, provided they were using the developer re-

commended by the manufacturer of the paper.

If you desire fine velvety blacks and beautiful grays in your print, your negative must be of a certain density or value to permit of a sufficiently long exposure to insure these tones. On the other hand, if we are forced to cut down our exposure on the bromide paper on account of the unsuitability of our negative, we cannot possibly secure the desired results, no matter what formula of developer used. I want you to realize if good blacks are desired our light must act on most of the bromide of silver on the coated paper. With this condition satisfied, the desired blacks may be secured from any standard developer.

(Continued in April Issue)

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

Newark Camera Club

"The Ground-Glass," the monthly publication of the Newark Camera Club has been received. This photographic organization, acknowledged to be one of the most progressive in America, owes its prestige to the number of advanced students who for years have been leading pictorialists in salons extending to countries beyond the United States. The club owns its home, having acquired recently a substantial brick dwelling in the center of Newark, which it has remodelled and equipped for the complete needs of advanced photography, the entire cost being financed through its own membership.

Acting upon insistent requests from manufacturers and dealers, we shall enlarge the paper to six or more pages and permit the insertion of advertisements from reputable tradesmen, beginning with the April issue. To insure prompt publication, it is necessary that copy be in our hands not later than March 22nd, and on the fourth Thursday of each month thereafter.

Oregon Camera Club

The twenty-eighth annual meeting of the Oregon Camera Club was held at their club rooms in the Elks building, January 9th. Tentative plans for securing new quarters, which is made necessary by the expiration of the lease on the rooms now used, were made. The date for the club's annual print exhibit was set for April 15th. Detailed plans for the exhibition, the purchase of some new equipment, and other routine business filled out a most profitable evening. After the meeting was adjourned a splendid luncheon, prepared by the wife of the retiring president, was enjoyed.

Officers elected for ensuing year were: President, C. W. Bernhardt; vice-president, A. A. Bailey, Jr.; secretary, Wayne G. Winchester; board of directors, E. C. Churchill, M. H. Barnes, and C. L. Bischoff. Albin Olander was re-elected treasurer. Retiring officers were: President, E. C. Churchill; vice-president, Jacques Letz; secretary, C. W. Bernhardt; board of directors, H. W. Sherrard, J. T. Botsford, and R. S. Milln.

San Francisco and Oakland International Photographic Salon

It has been decided that the two photographic salons of San Francisco and Oakland should now work in conjunction. The exhibit, after being shown in the former city, should then be transferred to the latter. This arrangement offers advantages to patrons and exhibitors alike.

The last day for receiving prints will be August 11th, 1923.

The exhibition will be open to the public at the Palace of Fine Arts, San Francisco, California, from August 31st to October 7th. Mr. G. H. S. Harding, secretary.

At the close of this exhibition the col-

lection of pictures will be removed to Oakland, where they will be on view at the Auditorium Art Gallery from October 15th to November 15th. Mr. Edwin S. Culver, secretary.

Address all communications to H. A. Hussey, secretary Salon Committee, 64 Pine street, San Francisco, California.

University of California Extension Division, Berkeley

Birds, Mammals, and Reptiles of California, by Dr. Harold C. Bryant. Beginning Monday, March 5th, at 7:45 p. m., Old Berkeley High School, Berkeley.

Natural History of the Sierra Nevada, by Dr. Harold C. Bryant. Beginning Tuesday, March 8th, at 8 p. m., Technical High School, Oakland.

Portland Society of Art

The annual exhibition of the Portland Camera Group Photographic Section of the Portland Society of Art will be held April 1st to May 2nd, and the last day for receiving prints is February 15th.

The exhibition is not large in comparison with some of the salons held in this country and abroad, but has always been noted for the high standard of quality maintained.

The pictures will be hung as usual in the Museum Gallery of the Portland Society of Art, and entry blanks can be obtained from O. P. T. Wish, secretary Portland Society of Art, Portland, Maine.

A great number of entries are expected but only prints showing distinct pictorial merit will be hung.

The Pictorial Photographers of America

The Pictorial Photographers of America held their first meeting of 1923 at their home at The Art Center, 65 East 56th street, New York, on January 8th.

Reports from various committees show that a very busy year is being planned. The committee in charge of the coming International Salon, to be held in May, reported that entry blanks have been broadcasted, and they are looking forward to a very large entry list.

The principal speaker of this evening was Dr. Eugene P. Wightman, from the Eastman Research Laboratory. His subject was "The Inside of the Photographic Plate." His talk was illustrated with lantern slides made from microphotographic negatives showing the action of the developer on the silver grains in the emulsions of various brands of plates of different speeds.

Members of the P. P. A. are constantly being called upon to furnish one-man shows all over the country. Raboniwitch had a show at the Newark Camera Club in November, followed by an exhibit by Wm. H. Zerbe in December, who also gave a demonstration of the Bromoil process on the 18th. Nicholas Murray had a show at the Brooklyn Institute of Arts and Sciences, which was followed by an exhibition of Bromoil prints by Eugene Henry and Alfred S. Wilson. It is rumored that Dr. Chaffee will show his wonderful Bromoils at the Chicago Camera Club. One of our members, statistically inclined, says that all prints exhibited in the Los Angeles Salon by contributors east of the Mississippi were by members of the P. P. A.

Individual members are constantly being sought out to furnish prints of some of their exhibition work. Mr. C. N. Capen recently had a request for two of his prints from a correspondent in New Zealand.

The program for each meeting is a most interesting one, and ought to bring out a large attendance at each meeting. A membership drive, inaugurated some time ago, is showing wonderful results, the average being about fifteen new members each month.

Intelligent foresight, indomitable courage and dogged persistence, if based on sound principles, must inevitably insure great achievement.—The Walworth Log.

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International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.

If there is no officer in your State, address the General Secretary

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

STATE SECRETARIES

California—A. E. Davies, 1327 Grove St., Berkeley.
Colorado—H. E. High, 1023 Champa St., Denver.
Idaho—Eugene Clifford, 902 9th Ave., Lewiston.
Iowa—Harry B. Nolte, Algona.
Kansas—H. H. Gill, Hays City.
Louisiana—Samuel F. Lawrence, 1754 Laurel St., Shreveport.
Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.
Missouri—J. F. Peters, Room 408, Union Station, St. Louis.
New York—Louis R. Murray, 927 Ford Street, Ogdensburg.
Oregon—F. L. Derby, La Fayette.

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Georgia—L. O. Surles, P. O. Box 434, Cuthbert.
Idaho—Eugene Clifford, 902 9th Ave., Lewiston.
Illinois—George A. Price, Box 286, Champaign.
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Minnesota—Leonard A. Williams, 622 2nd Avenue South, St. Cloud.
Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.
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New York—Charles F. Rice, P. O. Box 245, Mamaroneck.
North Dakota—Jas. A. Van Kleeck, 619 Second Ave., North Fargo.
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West Virginia—William E. Monroe, Box 298, Point Pleasant.

NEW MEMBERS

5235—Walter N. Shadler, 197 Elton St., Brooklyn, N. Y.
Class 2.

5236 Ray W. Hawley, Earlimart, Calif.
Class 2.

5237 Walter O. Gutlohn, 747 Lexington Ave., New York, N. Y.
Class 2.

5238 Fannie Hoyt, Wayland, Mich.
Class 3.

5239 Dy Yu Tuy, Fotografia Moderna, Albay, Albay, P. I.
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5240—R. W. Steel, Box 232, St. James, Minn.
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RENEWALS

170 Thos. J. Ronald, Woodbine, Iowa.
All sizes up to 8 x 10 and 7 x 11 of a variety of subjects of landscape, architecture and portraiture; for the same or anything artistic. Am especially interested in nudes and semi-drapes, all prints on single-weight paper. Will make an effort to be prompt with all exchanges, but sometimes am too busy to get the next mail. I desire and extend the courtesy of returning any unsatisfactory work. Class 1.

3024 Franklin F. Wells, 114 McCann St., Benton, Ill.
2¼ x 3¼, 3¼ x 5½, 5 x 7, and post-cards, Azo, Artura, Velox of rural scenes, home portraiture, speed pictures and lake scenes, some soft focus; for speed pictures and general views and soft focus. Only good work sent and accepted. Class 1.

3852—J. W. Jefers, Room 610 McClure Building, Frankfort, Ky.
3¼ x 5½, 5 x 7, 8 x 10 and enlargements. D.O.P. of genre, landscape, few nudes of children only; for the same. Only good work sent and accepted. Class 1.

4725 W. H. Dickinson, Box 112, Fairfield, Iowa.
4¼ x 6½, and smaller, on glossy paper of landscapes, including hills, rock formations, and anything of interest geologically; also bathing girls, figure studies and portraits by flashlight, artificial lighting, etc. I send all work on approval and invite correspondence from mountainous regions and the South. Class 1.

5001 Edna R. Gordon, 40 Marshall Rd., Yonkers, N. Y.
Class 2.

5061—Carl Kruger, Big Stick Lake, Sask., Canada.
Class 2.

5086—Emmett K. Emslie, 2109 Bagley St., Flint, Mich.
3¼ x 5½, and some smaller and larger, D.O.P. of general subjects. Nature, Grand Canyon, Cliff Dwellings, scenes in Kansas, Ohio, and Michigan; for anything of interest, especially natural scenery and nature studies. I desire to exchange only good work. Class 1.

5163—Paul W. Savage, 766 Main St., Worcester, Mass.
4 x 5 and 5 x 7 glossy prints of news value; for anything of general interest. Class 1.

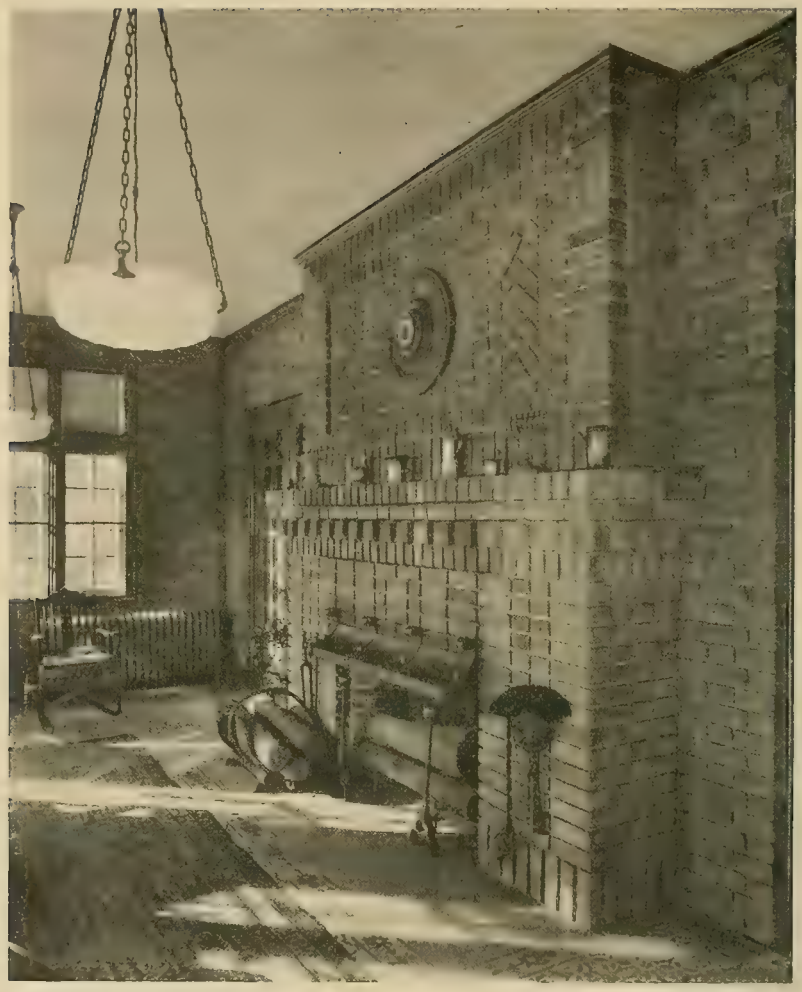


Photo by Fishbaugh & Lee

The Commercial Picture Exhibit

The Commercial Photographers of San Francisco loaned the very interesting collection of prints which had been exhibited at the last P. A. of A. convention, held at Kansas City, Mo.

The entire collection of pictures were displayed at the recent monthly meeting and dinner of the Photographers' Association of California, and added greatly to the interest of the evenings' doings.

We print above a cut of one of the pictures which had been awarded honors. It is the work of Fishbaugh & Lee, photographers of Atlanta, Ga.

Notes and Comment

Reported by Wm. Wolff

A. L. Adolphson, with Pike and O'Neil, Portland, Oregon, photo stock house, in finishing department, was in San Francisco recently on his way South and East to visit different finishing places for new ideas.

Allen & Metzler, formerly of Centralia, Wash., have opened a studio at San Luis Obispo, in Sunny California.

John Gordon, formerly with Lowman & Hanford, Seattle, Wash., is also in sunny California now. Has charge of one of the largest photo departments in Los Angeles.

W. F. Burhaus, San Jose photographer, is moving into ground floor location. Good luck!

Eng. Giroux of Taft now has the Tucker Studio, San Jose, and reports his business very good.

H. M. Hamlin of the Mission Photo Shop, San Luis Obispo, has added a Pako dryer and Peerless power print squeegee to his already well-equipped finishing plant.

J. W. Collinge of Santa Barbara is putting out some very fine colored prints for the trade.

Mr. Kaye, of Hirsch and Kaye, San Francisco, has just returned from an Eastern trip.

Gordon Bennett, formerly of Sandy's, Portland, Oregon, is now giving "Service with a Smile" at Hirsch & Kaye's, San Francisco.

Nathan Reiman, of Stockton, Cal., has put in new tank system in his finishing plant.

F. H. Hansen, the Stockton photographer, was a recent visitor in San Francisco.

The Pako Corporation have just moved into their new plant at 1006 Lyndale avenue, No., Minneapolis, Minn.

Australian Salon of Photography

Exponents of Pictorial Photography throughout the United States and Canada, as well as those overseas, will be interested to know that an Australian Salon of Photography has been established.

It is hoped to hold the first exhibition in Sydney early in 1924, probably at Easter, which is the busiest time of the year, but ample notice will be given of the date when fixed.

Many leading Interstate Pictorialists have promised their support, and it is also proposed to invite American, Canadian, British and Continental workers to exhibit.

The following are the members of the Salon:—

Messrs. J. G. McColl, Harold Cazneaux, J. E. Paton, C. W. Bostock, C. E. Wakeford, W. S White, Monte Luke, S. W. Eutrope, and D. J. Webster.

Further particulars and information regarding the first Australian Salon will be published in this journal from time to time.

The secretary is J. G. McColl, F. C. P. A., 379 Kent Street, Sydney, N. S. W.

Communication from Harold M. Bennett

The following binoculars were stolen out of a shipment from Messrs. Carl Zeiss, Jena, to us, arriving on the ss. Manchuria on February 3rd, 1923:

1 Delactis Binocular, No. 1130113, in case.

1 Delactis Binocular, No. 1130162, in case.

1 Deltrentis Binocular, No. 1046649, in case.

1 Deltrentis Binocular, No. 1048033, in case.

1 Deltrintem Binocular, No. 1042030, in case.

1 Deltrintem Binocular, No. 1082764, in case.

1 Deltrintem Binocular, No. 1082913, in case.

1 Delturisem Binocular, No. 1088716, in case.

1 Silvamar Binocular, No. 871536, in case.

1 Silvamar Binocular, No. 1121278, in case.

1 Teleba Binocular, No. 472947, in case.

1 Teleba Binocular, No. 472948, in case.

1 Teleba Binocular, No. 1061959, in case.

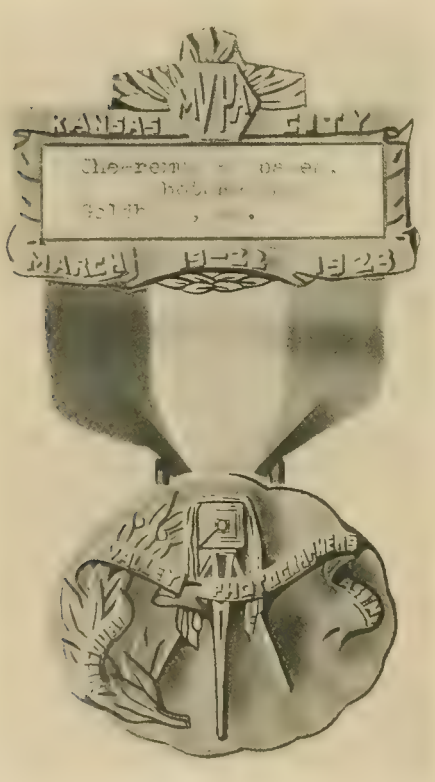
All these glasses are made by Carl Zeiss, Jena, and bear the numbers and trade mark engraved on the glasses.

Should any of the above-named glasses be offered to you, we wish you would notify the proper authorities, in order to apprehend the thieves.

Thanking you for your co-operation in this matter, we beg to remain,

Very truly yours,

HAROLD M. BENNETT.



Missouri Valley Photographers Association

E. V. King, Secretary, 827 Kansas Ave., Topeka, Kans.

One thing that should not be overlooked, and the sooner it is attended to the better it will be for those who wish to attend, and that is the engaging of rooms, either at the headquarters hotel, which is the Hotel Baltimore, or one of the nearby hotels. If you do not care to write the hotel direct, any of the Kansas City dealers will be glad to care for this matter for you. Rooms may be had at very reasonable rates if you desire, and get your order in early.

The biggest thing in this year's convention will be the help it is to each photographer who attends in increasing his profits.

The officers of the M. V. P. A. feel keenly the responsibility placed on them in making up the program for this year, and realize they must offer something very much worth while in order to make it possible for the photographers to attend.

We are gathering from every source possible suggestions by photographers who have found easier ways to do their work and better equipment to do their work with. New ideas in advertising and many other phases of work will be discussed at the convention.

The mornings of the convention will be given over to photographers talking together and being talked to by men of experience who are practical photographers.

The afternoons will be given to seeing what the dealers have to offer in the way of new equipment, new styles, etc.

North Central Photographers Association, Minneapolis

At a meeting of the executive board of the North Central Photographers' Association, held in Minneapolis, January 22nd, the dates for the coming convention were fixed for September 24th to 27th, and the place at the Fort des Moines Hotel at Des Moines, Iowa. The dates and location for this year are ideal, both for photographers and manufacturers. President H. E. Voiland of Sioux City is working on a program that promises to be different.

Announcements of this will be made later on.

Photographers in the North Central territory should mark the dates now and plan accordingly.

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A Photographic Monthly

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CONTENTS FOR APRIL 1923

"Chubby" (Frontispiece) — By De Gaston
With Camera and Sleeping-Bag — By Will H. Walker 153
A Souvenir of Golden Gate Park — By H. W. Arth 155
Clouds My Hobby — By Leo Tiede 156
Wild Life Photography. IV.—Picturing Baby Birds — By Stanley Clisby Arthur 158
The Taree Brothers Yosemite — By H. S. Lawton 163
Locked Deer Horns — By A. F. Turner 165
Snow Scenes — By Dr. H. W. Barr 167
Using the Camera to Prove "Traced Forgeries" and Their Perpetrators — By Chauncey McGovern 169
Oakland High School Meet — By G. Allen Young 177
The Verito — By Sigismund Blumann 178
A Pictorial Problem — By Edgar Felloes 181
Editorial 185
The Lens Speed.
For the Professional 186
Photographers' Association of California. Photographers' Association of the Pacific Northwest.
A Photographic Digest 189
New Desensitisers. Pinakryptol. Pinakryptol Green. Action on Latent Image.
Art and the Crafts 193
The Tree in Mid-Distance.
Developer for Line Work 195
Our Book Shelves 196
International Photographic Association 198
Notes and Comment 199

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief

EDGAR FELLOES, Associate Editor

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VOL. XXX APRIL 1923 No. 4

With Camera and Sleeping-bag

By Will H. Walker

Portland, Oregon

Note: Mr. Walker's account of his sleeping-bag is of value to many readers. It is a thoroughly practical contrivance devised by a practical man; it has been tried out and proved a decided success.

Will H. Walker is a veteran of the Oregon Camera Club, of Portland, Oregon. This Club was organized in 1895, and it was in the club rooms in the very early days that Mr. Walker and the writer first met. We were both members and a friendship grew between us that has now lasted a generation.

Sooner or later, most amateurs come under the spell of the photographic salon. It was in 1902 our friend's work was exhibited at the First American Salon, New York City. Since that time Mr. Walker's pictures have appeared on the walls of the Royal exhibition London; the Copenhagen exhibition, Copenhagen, Denmark, and the salons of New York, Pittsburgh, San Francisco and Los Angeles.

We published in Camera Craft, last year, an engraving of Mr. Walker's picture, "The Lifeboat," it was accepted by Pittsburgh, San Francisco and Los Angeles. This work was a combination print from three negatives executed with considerable skill, and the photographer told our readers just how he did it.

Will H. Walker, takes pains with all his work, as the following extract from a recent letter will show:

"Enclosed find two fair pictures of that Sleeping-Bag. You have no idea what an infernal thing it was to photograph. Its color was a deep olive brown. On the ground, it fades into it. I partially solved the problem by hunting around until I found some high weeds and dry light grass, against this I got some contrast."

We greatly appreciate our friend's pains, we laughed over his trouble. It was inhuman on our part, but reader—"Editors are not human."—E. F.

Rambling either in the mountains or on seashore in the silent places, with camera and sleeping bag, leaves little to be added to the pleasure of a summer jaunt. Those who love the wild trails stop not for distance. Even in the lonely stretches, rough and sometimes remote from shelter, there do they find their way in search of the beauties of nature.

Several years ago, after many long hikes, with meager accommodations, I concluded that a desirable addition to the photographic equipment would be a light and waterproof sleeping bag. It would provide comfort, often when none was to be had, and after two years of use with the camera, the combination was found ideal.

"YOUR HOTEL" WEIGHS 2¾ POUNDS

Weight being a consideration, I had made to order a sleeping bag of Silkolene, a very light, strong waterproof fabric. This bag is seven feet long, three feet wide, with a head flap four feet long. The head flap though longer than usual, is so arranged that at night-time it can be drawn over a cross stick which rests on two forks, one on each side of the bag, making a small lean-to over the head, protection from wind and rain being provided by triangular curtains on each side attached to the flap. Entire weight of bag complete with ropes is two and three-quarters pounds. Ropes are provided for the two corners at the foot to stake the end of the bag fast to the ground, to prevent it from creeping up when getting into it. Ropes are also attached to the corners of the head-flap, thence through rings on each side half way down the length of the bag, to pull the flap over the head after crawling in. One side is open half way down with small snaps to fasten edges together. The blanket I carry weighs about four pounds and has been found ample for warmth, both in rain and in one instance, during a night of heavy white frost. Often when unable to find boughs or ferns the writer has bunked in the bag on the bare ground, fully protected and warm, with only a strip of canvas underneath for ground cloth. I mention this as my age and state of health usually prompts a leaning towards pleasant and convenient indoor accommodations. When hiking between points long distances apart, nothing contributes so largely to peace of mind to know that you can spend the night comfortably when darkness overtakes you, without recourse to quarters in places where ac-

commodations are rather primitive and many times in questionable condition. In my coat, an Engineer's coat, with ample pockets, I can carry one or two days supplies, a light change of clothing, extra films, many other useful articles and even a small aluminum cooking equipment. The entire load including my Graflex in case, which weighs eleven pounds, is well within twenty-six pounds. Roughing it with a blanket alone, hardly appeals to a city seasoned house dweller, but with the outfit herein described comfort can be had most anywhere.

This description was written by request of my good friend the Associate Editor. When I mentioned the matter, he immediately saw the advantage of a light equipment that enables one to carry with him the means of shelter, when night overtakes you, miles from nowhere, weary and without inclination to add to the miles already behind. To those who love the woods, seashore and mountains, the beautiful isolated places, the comfort and pleasure of many a rough trip may be made possible with such an outfit.

"I'M ONLY A SQUIRREL, BUT I HAVE A GOOD TIME"

A Souvenir of Golden Gate Park

One of the familiar sights in Golden Gate Park, San Francisco, are the squirrels, the pets of the children. At this season of the year squirrels may be seen on any of the pathways in the park, and they are pretty bold, too, as with very little encouragement they will climb into one's pocket and hunt for the expected nut. This gives the youngsters a real thrill of delight, and their eyes sparkle with excitement and anticipation.

Our contributor sends in the following data concerning this snapshot: Time, December, 11 a. m., day cloudy. Stop used, F 6.3: Speed, 1-10 of a second: Lens, Zeiss Triotar F.6.3: Distance, lens to object, 4 feet.

We can quite believe the photographer had to do considerable maneuvering to get the little fellow to behave himself, as a shot at four feet is difficult. Under similar circumstances we favor a greater distance between camera and object. Supposing we doubled the distance, our negative would then be half-size, and then let us enlarge that negative to twice the linear size, we then secure a better perspective, and also we are enabled to increase our speed of exposure, and as it is easier to approach within eight feet rather than four feet of a little bundle of nerves, this plan has much to recommend it.

(Photo by H. W. Arth, San Francisco, Cal.

CLOUDS—SAILING LIKE SHIPS IN SILENCE

Clouds My Hobby

By Leo Tiede, Santa Ana, California

Many readers will perhaps think it strange that a professional photographer should have a photographic hobby, but it's a fact and I am not the only professional who enjoys going into the open and having a pictorial tussle with nature herself, for the love of it.

Outdoor photography appeals to me as nothing else does, especially cloud and moonlight scenes. Perhaps I am more fortunate than some in that I can drop my work when the woods whisper and each tree seems to beckon. I can stand routine work just so long and when the impulse for freedom can no longer be denied, we, my camera and I, take the car for some spot and revel in clouds, trees and color, to our heart's content. Why, bless you, we don't take these trips to loaf around. If my camera could talk it would tell you there are times when we slave. A hobby seems to be a task master after all, a most exacting boss, it drags one all over the place and leaves one with hardly a leg to stand on, to get home as best he may, utterly tired.

The Editor of Camera Craft, when writing me regarding my prints, asked for an article concerning them, he wished me to say something on clouds, and he added, if you do not care to write an article, just sit down

DAPPLED SKIES -- EVER CHANGING

and tell us how you do it. That seemed like a joke on me, I would have to write anyway.

To me there seems not much to be said. Big Bear Lake, up in the mountains, eight thousand feet up, rests with the pines. The place I had selected I know very well, it is wonderful; a big mother, nature seems and we are the tots, climbing around. During the months of July and August, this spot is particularly favored with clouds. They float over the lake in all their magesty, from billowy masses to fantastic whisps mostly white on an azure blue ground. The heat waves of the desert seem to have much to do with the clouds in this locality. The sky may be clear and blue at one moment, then a little speck of white appears, it grows larger and whiter with incredible speed into a huge fluffy white cloud. Now others appear, then others, and all come sailing along like ships, in silence. A wonderful sight, but we must not tarry; there is always a vantage point.

As to lighting, there is an endless variety. These photos were made about 10 A. M., in July. The light came from a little to one side, the sun was shining through the clouds almost into the lens. They are not thunder clouds, they are almost white and I like this lighting, it gives more contrast when used with a Wratten & Wainright K2 filter. For my negatives, I favor Eastman Commercial Ortho film, and my developer consists of good old reliable Pyro. The exposure time was of necessity long, on account of the absence of reflected light among the trees; I gave half a second. My lens is a Goerz Dagor, and let me repeat, my hobby—clouds.

Wild Life Photography

IV Picturing Baby Birds

By Stanley Clisby Arthur

Former State Ornithologist of Louisiana

Graduating from the class of nest photography, where the difficulties of picturing the marvelous structures birds build and the glistening shells they lay therein has been enumerated, we come to one of the most absorbing pastimes connected with wild life photography—that of picturing baby birds.

Interesting as well as easy of accomplishment is this picture work with the camera. As in nest photography we abandon stratagem, blinds, covers and the general whatnot connected with the picturing of animals

A "horrible example" of picturing birds in a nest. This is one of the authors' early sins in wild nest photography practised on helpless baby blackbirds. It is hoped it will never be duplicated.

that can fly from us when we approach them and all we need is a camera of some type or another and the ability or opportunity to find a nest with baby birds in it.

Then take your graflex, stand camera or kodak and blaze away. The birds are there for you and your only anxiety need be the cost of films or plates, provided, of course, you carry enough ammunition with you on a bird picturing hunt to be extravigant. One cannot take too many pictures of baby birds. They never assume the same pose. Three shots at the same three babies in one nest from different angles give you three different and dissimilar pictures, as the rule.

The appeal of a baby picture is the same whether it is on our own, a frisky little long-legged colt, a moo-cow's son and heir, a baby buzzard, even a baby pelican is "awfully cute!" There is only one class of baby

Whether or not a baby pelican is "awfully cute" is still a matter of opinion. This pelican squab was doubtless a thing of rare beauty to its doting, big-pouched mother. As a photograph, it has the value of showing the exact appearance of a pelican about one week old and the kind of a nest the parent birds build as a place to incubate the egg and as a nursery for the future son and heir.

bird pictures that are not worth the pressure of an antinous release and that is when the nestlings are huddled in a nest, heads all together and their muscles too weak as yet to enable them to look up and tell the world they're hungry. These huddle pictures are not much, unless you're taking them for a naturalist who wants them because of the fact they picture just what they do. Therefore, do not waste time, patience and plates on bird babies in the pink worm period.

The picturing of ground-nesting bird babies is comparatively easy. Too high a viewpoint is bad, for the whole photograph becomes "map-like." This baby Forster tern was photographed too high—a lower viewpoint would have improved the picture.

When the birds are a few days old and begin peering over the side of the nest wondering what in thunder is keeping pa and ma so long on that worm-hunting expedition is the ripe time for picturing baby birds. You

can either make a noise like a fat caterpillar or some squeaky smacky sounds of the lips and—pop! up come the heads, open go the mouths, click-ick should go the shutter and the picture is yours.

This baby kingbird had an expressive way of making the empty state of its "tummy" known to its parents. Moments such as these should be seized upon as the time for making the exposure rather than when the baby birds are huddled in the nest.

Careful focusing is essential with the photographing of young birds because you can't stop down very far. A minimum of exposure is necessary because of the fact that your subjects will not "freeze" for you a sufficient length of time. The moment the babies recognize the fact that you are not mama or papa and that you are a worm too big to be swallowed in comfort, down will go the head and you'll have to wait a while before you can fool them again with a fusillade of lip smacks.

Birds that nest over water, such as herons, are hard to get to, but once their nests are in camera range the picturing of the infant inmates is as a rule a simple matter. A **pirogue** (a cypress dugout) was used to photograph these Louisiana herons.

Sometimes a fifth of a second can be given without registering movement but it is safer to figure on making these kinds of exposures at 1-25th. Sunlight can be utilized or the exposures, provided you are using a fast

lens, can be made in the shade. Even with the sun's rays full on your subjects do not stint exposure. Make all your errors on the **over** side because you must remember you are working up close and your bellows

Back lighting, to take a hint from the movies, is effective in picturing baby birds when their fluff is giving way to the first phase of the feathered stage. This baby blackbird was taken from the nest and posed on a convenient twig, **not** at right angles to the camera.

are racked out, so as to secure large images, and your lens is working at a **smaller** aperature than that marked on the barrel. In other words, your effective aperature is one that the sensitive emulsion takes notice of when the shutter opens and closes.

If the birds are in a particularly dark hole the mirror, the same mirror you **should** carry with you on all wild life photographic jaunts, can be utilized to throw either sun or sky light on your subjects.

To show baby birds for what they are, they can be removed from the nest and posed on a nearby twig. "Stopping down" and giving a slow exposure will secure the necessary detail. No concealment is necessary for this class of work when the parent birds are not included in the photograph.

While it is laid down, in a rather dogmatic manner perhaps, that your birds should have their heads and eyes front when they are pictured this is not always the case should pictures be needed. With this chapter is

shown a baby Forster tern in its nest. It is pictured too high, to be perfect, but shows the downy chick resting its bill on the edge of the nesting material. Such a pose is a very excellent way to picture baby birds, whether ground nesters or those hatched high in a tree top.

When the befeathered young leaves the nest and begins life for himself is a prize time for photographing, as you will picture the bird in its juvenal plumage — a period that rarely comes under the lens of the camera. This crayfish-seeking bird is a black-crowned night heron, about five months old and "shot" from a blind.

If you find a low located nest do not shoot directly down upon it like the example shown of a nest full of baby blackbirds taken during my early days at wild life picturing. Its sole value today is to act as a "horrible example" of picturing baby birds in a nest—let no one ever duplicate it!

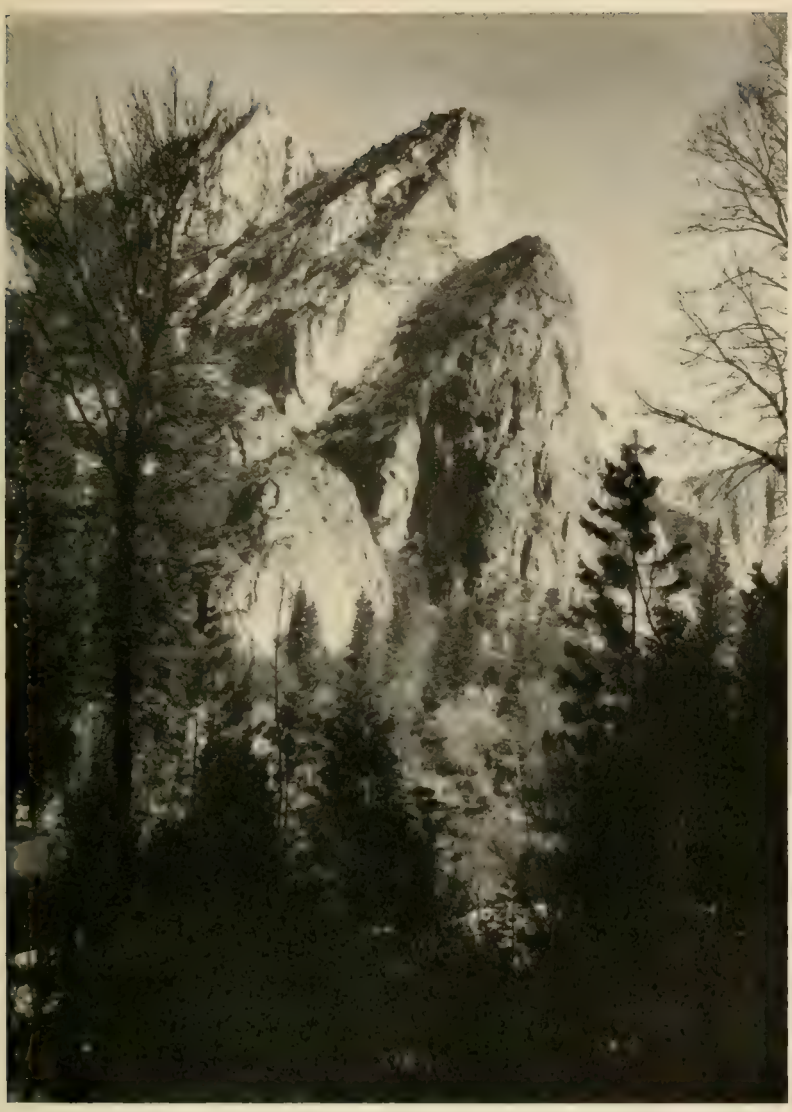
When a nest containing your prospective posers is set deep in a bush or trees or hidden by grasses do not cut or tear away the concealing foli-

Immature great blue herons photographed from a treetop. This illustrates the practicability of a vest-pocket camera of the Icarette "A" type. Easily carried during the laborious climb up the swaying cypress, easily manipulated while clinging to the treetop "with one's teeth," and easily enlarged afterwards owing to the exquisite definition of the three-inch anastigmat, stopped to f 11 and exposed at 1-25th.

age. **Bend** and tie back the branches, leaves and grass stems with the ball of twine (which also **should** be in your pocket) and when picture taking is over allow the foliage to spring back into place.

Baby birds found in nests sheltered by foliage are unable to endure

(Continued on Page 164)



THE THREE BROTHERS -- YOSEMITE
By H. S. Lawton

Data—Taken with a Goerz 6½-inch lens, stop 8, with skyfitter, one second exposure. Negative on Commercial Ortho film; 11.30 a. m.

(Continued from Page 162)

the direct rays of the sun. You will note when you discover the birds home that the devoted builders selected the site with just this in mind and if "Man's home is his castle" and thus sacred, a bird's nest should be just as scrupulously considered.

Above all things, when you find a bird's nest on a branch that does not admit of easy picturing, do not cut it down and place it where picturing is easy. Of course it is done, but it's not really a sporting thing to do in any circumstances. While it is true that the parents will not desert their young, once they are hatched, it does mean that the protecting canopy of leaves wither and the nestfull is subjected to the pitiless rays of the sun and the pelting of rain, or the nest is so placed after the picturing is accomplished, where natural enemies can get at the helpless young.

Personally, I am not at all squeamish about taking young from the nest and, after making their portraits, **put them back where they came from.** This is only done, however, in the fledgling stage, that time when the down is shot with the feathers that will clothe them for some time to come. At this time they can be handled, provided you do it correctly, and posed on a convenient twig. No harm will come to them and the episode in the youngsters' lives will be nothing more than a little pre-flight exercise that will not only tend to harden the muscles that must sustain them later.

Have your photographic twig well arranged before conducting your sitters to this woodland studio you have arranged. Take notice of the direction of the light, pay considerable attention to the background and avoid, as much as possible, locations that will give you spotty effects in the rear of your subjects. Have your camera all focused, if you are using anything but a graflex, set the shutter and remove the slide—if you are using plates.

Then place your babies on a twig, which you should make sure of before hand that it is not so thick that they cannot clasp their toes about it, and make the exposure when they assume a pose that looks just right. You will find that the young of all tree nesters will clasp the support naturally and as though they had been there before. This is instinct. All birds that nest in trees or bushes are termed by naturalists **Passeres** or Perching Birds, and the ability to clutch their toes about a perch comes through a long, long line of ancestors, likewise their ability to balance thereon and not tumble off on the back of their head.

If you do not do your picture making too close, allowing a generous margin on either side, and the smaller the image, will give you better definition so that the resultant negative can be enlarged, you may have the luck to have one or the other of the parent birds come to their young and feed them. You must be on the alert for such an opportunity and take full advantage of it. This phase of camera work will be dwelt on in a later chapter.

Picturing baby birds is this fashion allows for a variety of effects.

Locked Deer-Horns

These deer-horns were found in the mountains south of Grangeville, Idaho, by Robert Walker, while hunting deer. The unfortunate animals while fighting had got their horns locked fast and had perished.—Photo by A. F. Turner, Coeur d'Alene, Idaho.

You can light them from the front, from either side or from the back. It all depends on how you place your twig-studio. Birds that are not fully feathered have a good deal of fluff or down and this can best be pictured by taking a hint from the movies and give them "back-lighting." If this is done another hint from the movies will be useful—lighten up the shadow side by reflected light of some kind, if possible, or be sure and give sufficient exposure.

When you are thus picturing baby birds out of the nest and backgrounds are apt to prove troublesome, because of out-of-focus, light halos or inky black shadow holes, a focusing cloth background can be used effectively. Do not have it too near your subjects so that the weave of the cloth shows but have it decidedly **out**-of-focus and your sharply defined birds will stand away in relief. The use of any kind of a white back ground is bad because it takes the baby bird pictures out of the nature environment and give them a studio effect.

While a focusing cloth is black (and an absolutely black background is almost as bad as a pure white one) if it is placed the proper distance away it will show grayish in the resultant print and this neutral gray effect will admit the blacks and whites and the intermediate shades to photograph properly and with the right contrast.

Just when to "push the button," as our grandfathers used to be advised, must be left to the individual in charge of the camera. Cultivate the habit of **seeing the resultant picture** before making the exposure. If the birds are huddled together with a most apparent scared appearance—wait. If they are doing nothing but endeavoring to get away and your

picture will show just this action—wait. In fact, if you are going to have a go at this wild life picturing fad remember that one of the most valuable pieces of apparatus you need is this **wait** thing. Cultivate it! Then, before you know it, the subjects settle in natural, pleasing or humorous attitudes. **Click-ick!** Hot pups, you go it!

Bird life should be photographed free from any association with man to be of real value as examples of wild life photography. It may be all right, once in a while to illustrate the fearlessness of a creature of the wild, or the devotion of a mother bird for her starving young so that she will fly on your thumb and stuff a fat caterpillar or an angleworm down the throat of the nestling you have perched on your little finger, but such pictures fall into the record class. The sole exception is when wild baby birds are pictured with our own little ones; then the pictures get into the "cute" class—but these have only that appeal.

Keep wild birds wild in your photographs. If you have to climb to the top of a tall tree to get a shot of inhabitants of a nest built in the tip top of another tree, climb and take your picture there where it should be taken. Sling a vest pocket camera to your belt and use it if you cannot lug your bigger gun along. The picture of immature great blue herons is an example of what the baby camera can do. To get the one illustrated I had to shin up a tall swaying cypress in a deep Louisiana swamp, but while I was there I secured a dozen exposures without much trouble. When I developed the two rolls I found the climb was worth the heart throbs that came to me a couple of times during the descent when limbs broke under my 160-odd pounds. Those were the times I was thankful I was not lugging a heavy camera and could clasp the rough trunk with two free and fervent arms.

Picturing baby birds is most attractive and comparitively easy. With graflex, stand camera, kodak or vest-pocket camera it is all the same. Even the ubiquitous Brownie can be used in some instances but I do not advise it. However, baby bird picturing is where the graflex shines. Use it, if you have one, in preference to any other type. If you haven't one there are still plenty and plenty of baby bird pictures for you to take if you go at it in the right way—realizing first of all the limitations of your instrument and then, best of all, realizing just what it will do if you operate it correctly.

In securing successful camera portraits of baby birds you secure the most alluring of all bird pictures, photographs that not alone you delight to look upon but photographs that your friends will like to inspect, whether they are camera fiends, pseudo-naturalists, bird lovers or not. This phase of wild life photography brings more returns in enjoyment than any other branch of the game.

Chapter V will deal with adult birds at their nests.

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A WINTER SUNRISE

Snow Scenes

By Dr. H. W. Barr
Bend, Oregon

Note: We have recently received some snow pictures rrom Dr. Barr, an enthusiastic amateur photographer. We were attracted to these prints because, as snow pictures go, they were out of the ordinary. The photographer has succeeded in conveying the unmistakable impression of winter. There is frost in the air.

These snow scenes are printed especially for the benefit of the novice. The average snow picture is undertimed and over developed. It belongs to that class of photograph known as "soot and whitewash," just black and white, neither black nor white is suggestive of atmosphere. And yet, what does a winter picture amount to without a sense of winter chill?

We wrote to Dr. Barr asking him for particulars as to his method of working and he very kindly replies with the following:

"In taking snow scenes, I usually favor Panchromatic films. That picture, however, 'A Winter Sunrise,' was made with an Orthochromatic film, a K2 filter and a Struss Pictorial lens. I did not think much of this picture at first until one day I printed it in a light gray tone, the effect was magical and proved to me the importance of selecting a suitable paper for

SHEVELIN PARK, NEAR BEND, OREGON

the negative. The light gray tones preserve the white of the snow and also the winter cold atmosphere. I now print nearly all my snow scenes that way. I also find white paper gives best results, the cream colored stock detracts from the realism of such subjects. I also note it makes little difference what developer I use as far as effect goes, but I have lately favored Commonol, not because it develops any better but because it is non-poisonous and I can use the same solution in the tank over and over by adding a little more of the stock solution to keep up the strength. I developed a batch of films in the tank the other day with the above mentioned developer and forgot them for an hour when the time should have been twenty minutes; these films were Panchromatic, but I found the negatives to be just fine, they print plenty fast and are of fine contrast. My experience with Panchromatic film is that it has great latitude both in time of exposure and in development. I have taken the same scene with exposures of half a second and two seconds respectively and hardly knew which was the better negative, this proves to me the great advantage of this film.

"I prefer a Struss Pictorial lens for snow scenes. I use my nine inch lens at F5.5 and F8. The construction of the Struss lens permits of almost shooting directly into the sun and at either of the two openings it gives a most pleasing diffusion and atmospheric effect."

Using the Camera to Prove "Traced Forgeries" and Their Perpetrators

(Written Exclusively for the CAMERA CRAFT)

By Chauncey McGovern
Handwriting Expert, San Francisco, California

[EDITOR'S NOTE: A perfect avalanche of commendatory letters have been received by CAMERA CRAFT, from all sections of America, respecting the article in the February issue by Chauncey McGovern on "Finding Forgery by Photography." Among these is a lengthy letter from Caesar A. Roberts, co-author of the nationally famous legal work entitled "Wharton on Evidence." Judge Roberts states that a copy of this article ought to be placed in the hands of every lawyer in the United States. So important is this announcement of Expert McGovern that a recent issue of The Literary Digest made illustrative mention of his photographic discovery, and it created a sensation at the last annual convention of the International Association for Identification. But details of the process are published here for the first time.]

Any person owning an ordinary camera (with a ground-glass and an anastigmat adjustable lens) can readily, surely and economically make clearly self-speaking photographs which will prove conclusively one or both of two vitally-important questions:

(1) Has a certain signature been forged by the "traced process?" and

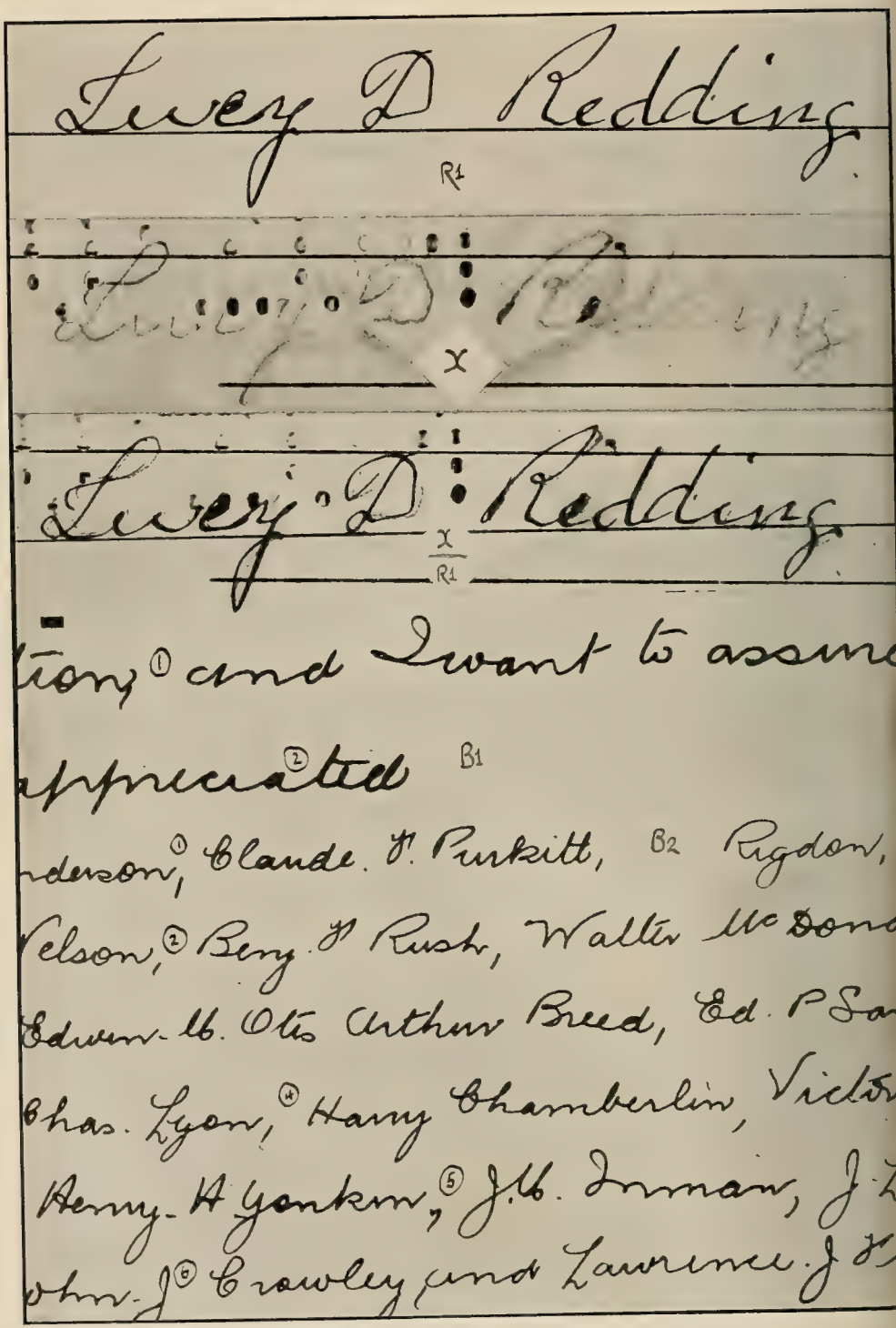
(2) Was the traced forgery done by a specific suspect?

In many a big battle in the courts in the past, where "traced forgery" questions have been involved, oceans of pages of stenographer's notes have been taken to make legal records of what different high-priced "handwriting experts" believed to be the truth about certain alleged "traced forgeries." And it has cost both sides large-sized seas of golden dollars to have the cases decided by juries,—which one of the two sides continued to insist were "misled" by the opposing experts.

But the expensive battlings of mere "opinions" will soon be a thing of the past in matters of "traced forgeries." This because a simple, ready, inexpensive—yet effective—way has been found to make ocular demonstrations of the facts by photographs.

The old-fashioned cumbersome and expensive and unsatisfying ways are fully described in most standard works on "Documents in Dispute;" and need not be mentioned here. Suffice it to outline the new procedure.

The simplicity of the new process will be at once obvious; so will be its cost. As to its "effectiveness,"—every time I have employed it, since I first thought of it, in the "Bradshaw" case, it has been necessary only to "show the pictures," when the culprit would break down and confess—depriving me, thus, of a fee for going before a jury and "proving" the case against him. But the loss of fees for "proving" cases in court is more than fully compensated for by the satisfaction of serving Justice—and getting so many more cases to prove without going to court.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Chas. Lyon, ④ Harry Chamberlin, Victor
Henry H. Yonkin, ⑤ J. B. Inman, J. L
ohn. J. ⑥ Crowley and Lawrence J. K

EXPLANATION OF CUT ON FOLLOWING PAGE

A working idea of the new procedure may be gleaned from an examination of the half-tone engraving appearing on the opposite page.

FINDING FORGERY AND FORGERS BY PHOTOGRAPHY

Utilizing the Camera to Prove (1) If a Forgery was done by "Tracing," and (2) f the Forgery was done by a Certain Suspect:

Halftone Engraving Shows Contact Prints of Five Different Negatives, all of them 'ROCESS Films,—the Prints being Pasted on the Same Card: R-1 shows a GENUINE ignature of a Bank Depositor, Done in Black Ink on a THICK Yellow "Signature- ard;" X Shows a Forgery of the Depositor's Signature, Written with Indelible Violet) Pencil, on a BLUE Sheet of THICK Bond Paper; X-over-R-1.

(X Shows a Contact Print Made from a Negative Obtained from a Contact Print ecured from a NEGATIVE of a Contact Print made by SUPERIMPOSING a POSI- IVE of the Negative of Signature R-1 over a POSITIVE of the Negative of Signature (Showing How Closely R-1 and X Correspond as to Height, Length, Slant and Other eneral Respects—thus Proving X to have been Forged by "Tracing" X from R-1; hile B-1 and B-2 Show the Regular, Undisguised Writing of the Suspected Bank ashier. The Contrasted Prints, with the Superimposed POSITIVES, Prove that in ery Little Particular Where R-1 DEVIATES from X (Such as in the Length and urvature of the final stem and strokes of the letter "n" in "Redding") the Deviation Seen to Tend Towards Shaping the Deviation-portion like the Regular Corresponding ortions of the Suspect's Writing. Although Suspect Was Held in Prison for Eight onths, Protesting his Innocence of the Forgery Charge, and Had a Strong Alibi, He onfessed to the Crime a Few Days After Expert Chauncey McGovern Worked Out he Above Set of Striking Proofs of the Man's Guilt.

This is the story in outline of how the new procedure came to be tilized and how it became effective immediately.

A lady named Lucy Redding, having a "time" deposit in a Richmond California) bank, presented her book to be balanced right after the end f the year. To her astonishment, her credit balance was some $10,000 hort. Investigation showed that five amounts of some $2,000 each had een "withdrawn" during the preceding six months. Declaring that she ad not withdrawn a cent, further investigation showed that each of the withdrawal receipts" was fraudulent and the signature to each a "traced" orgery. All the bank's entries regarding these five amounts were in the andwriting of a former clerk named Bradshaw, who had resigned some onths before, after having won a large prize in the Mexican lottery. le was then in Australia.

Briefly, the bank authorities came to believe where Bradshaw had ctually "won his lottery prize." But merely **believing** there was a forgery, nd **proving** it, were radically different things. Various local handwriting xperts were engaged, who utilized the numerous old-fashioned methods, ut without avail. Finally, the matter was submitted to myself by District ttorney Archibald B. Tinning, who frankly confessed his inability up to nen to get **legal proof** against Bradshaw.

After considerable thought, I decided to make a negative of the origi- al signature of Miss Redding on the bank's card; then a negative of one the traced forgeries; I then made a positive from the genuine signature; nd also a positive from the signature that was forged. These I super-

imposed, and from the same made a new negative. Of this new negative I made a bromide enlargement, with the result that in every tiny detail where the traced forgery differed from the original, the divergence was plain to the untrained eye. I then made negatives of corresponding letters in the admitted writings of Bradshaw, making enlargements of selected letters. Placing these enlargements alongside of corresponding letters in the superimposed forgery and original, it was found that in each instance where the forgery deviated from the original or genuine shape or form or angle of a letter that the deviation was towards a shape or form or angle that was characteristic of the real writing of Bradshaw.

When the man was confronted with the enlarged photographs he broke down—after eight months' protestation of his innocence—and confessed to the whole thing.

Full details of the long, but interesting, story are related in the address of the Honorable Archibald B. Tinning, district attorney of Contra Costa County, California, delivered before the Seventh Annual Convention of the International Association for Identification. at Martinez, California, on May 13, 1922.

To prove easily, quickly, inexpensively AND POSITIVELY whether or not one, or more, questioned signatures (or other writings) is, or is not, a forgery of the "traced" variety, I am using today, with most satisfactory results, the following photographic procedure, which, as far as I am aware, is original:

1. Take each signature separately;
2. Place it upon a sheet of BLACK paper, laid on a piece of PLATE glass, which fits into a printing-frame (photographer's) of 11 x 24 inches;
3. Over the face of the signature, place a second piece of plate glass of the same size as first;
4. Carefully INVERT the two pieces of glass, with the writing resting on the black paper within, so carefully as not to permit the signature-paper to shift its location;
5. Using NO RAY FILTER, and placing electric lamps, with BLUE bulbs, to both right and left of the printing-frame, make an exposure through a document-copying lens, on a PLATE of the variety known as "PROCESS;" do **not** use a "film" for THIS exposure;
6. Putting the developed negative, when thoroughly dried, into a printing-frame, next go to the darkroom and place an undeveloped PROCESS "film" in the same frame, just as if about to make, from the developed negative, a regular contact print on photographic paper;
7. This "film" to be developed just like a regular paper-print; producing a "positive" from the original "negative" of the writing in question;

8. Do exactly the same thing with the genuine signature from which you believe the forgery was traced; or, if possible, do the same thing with a SECOND questioned signature which you suspect was, also, traced from the same model as the first suspected signature;
9. Superimpose the two resulting "positives:"

Result:—If EVERY section and portion of one positive is seen to EXACTLY SUPERIMPOSE on the corresponding section or portion of a second positive (with respect to the height, length, slant and other general features), then the two writings are either the genuine original and its traced forgery, or else the two suspected documents were forged by the traced process from a common model.

Before going to the expense and trouble of making negatives and positives for "superimposition" of suspected traced forgeries, it is well to first hold the suspected signature, superimposed over the suspected model, placing BOTH writings between the eye of the observer and DIRECT SUNLIGHT, or a POWERFUL ELECTRIC LAMP. Always bearing in mind that when a person commits forgery by tracing, the model or the sheet on which the forgery is in course of being made is liable to SLIP to some extent. In this event, the signatures will NOT SUPERIMPOSE in TOTO. But should this happen, at least EACH word of the one signature will superimpose on the corresponding word in the other signature.

It is also well to remember that when the paper or card on which the original or genuine writing is thick, or when the paper or card used for the tracing is more or less thick and apaque, the traced writing will diverge, —in some INCONSPICUOUS respects,—from the genuine writing; but that always the GENERAL length, height, and width of a traced forgery will be the same as the GENERAL height, length and width of the original.

The use of "tracing-paper," in ascertaining whether or not a suspected writing was traced, cannot be too strongly condemned. First, because the use of the tracing-paper is all to apt to SPOIL the use of the original for scientific study and comparison—by blurring or soiling or indenting same; and, secondly, the human mind, be it ever so conscientious, is all too liable to UNCONSCIOUSLY MISTRACE a writing in the pardonable, non-criminally-intentioned desire to prove or disprove a suspected forgery.

So carefully should we avoid the use of personally-made tracings in comparing suspected traced forgeries with their suspected models, let it be known that the author has had come under his own observation some signatures of vital importance in court trials where real "handwriting experts" have so multilated "model" signatures, by making tracings of same for court purposes, that the originals were practically worthless for trial purposes.

In many other cases the author has seen in the courts of Asia and of America, hand-made "tracings," even by trustworthy handwriting experts, to diverge from (or cling to) certain standards, just because the

man making the "tracings" had his pen or pencil influenced,—unconsciously, of course,—by his own wishes (or hopes) to learn or find or prove the examined writing to be either genuine or forged, according to the interests of the expert's client. In hand-made "tracings," the "human equation,"—the human inclination to have one's hand err as errs one's brain,—must always be carefully looked for by the opponents. With the camera, however, there is no fallible human brain to err.

Forgeries of the traced variety are made either (A) by placing the "model" under the sheet on which the signature is to be traced, or (B) by placing the model signature over the sheet on which the tracing is to be done, either by carbon-paper tracing or other means which will not be mentioned here, for obviously good reasons.

In the case of traced forgeries made by placing the model signature over—superimposed upon—the sheet or card on which the model signature is to be traced, there is (fortunately) usually left in, or on, or under, or near the traced forgery, a sufficiently large quantity of the carbon-paper pigment (or of the pencil-marks or what-not), to enable the expert analytic of documents in dispute to prove the forgery a tracing, even without the use of a model or without finding the model signature used. In the latter event, there is, of course, no need for the making of positives from the negatives of the questioned signature.

To best examine writings which it is suspected to have been forged or tampered with, place the paper between your eye (or microscope) and and real daylight coming from a north-facing window. Sit or stand so that you face the window and not in any position where the direct light strikes either of your cheeks or the back of your head.

Every signature found to be a forgery, however—either by tracing or otherwise—should be photographed immediately, in such a manner that later, an heroic-sized bromide enlargement may be made from that negative, to show up to the layman's eyes the tell-tale features which the expert documentary analyser sees through his microscope. Reluctant as I am to state, it is a fact that the author has within his 30 odd years' experience with juries and judges, found comparatively few who can really see through the microscope, in the court room, features which they hear of there for the first time. For their benefit, and for the consequent benefit of justice the enlargements should show, in one continuous bromide sheet, the various features which the expert sees, one by one, through his microscope aided by his special microscopic lamps.

R-1 is a printers' print; from a 150 screen halftone (mechanically made) engraving, of a photographer's print from a "negative" of a genuine signature; written, in black ink, on a thick primrose-colored bank signature card. In short, R-1 is a genuine signature.

X is a similar engraving, similarly made, from a negative of a forged signature, written lightly, with an indelible lead-pencil, on a yellow-colored receipt form, of thick bond paper. In short, X is a forgery of R-1.

X-over-R-1 is a printer's print; from a 150-screen halftone (mechanically made) engraving, of a photographer's print of a "negative" made from a "negative" secured by superimposing a "positive" of R-1 over a "positive" of X and making a "print" from the superimposed "positives" put in a photographer's "printing-frame." The lines of X show much less boldly than the lines of R-1 simply because R-1 was written in bold ink and X was done in lightly pressed lead-pencil. In short, X-over-R-1 shows, in close contrast, the differences in the shapes or turns or angles of the various letters in R-1 compared with the corresponding letters in X.

B-1 is a printer's print; from a 150-screen halftone (mechanically made) engraving, of a photographer's print of a "negative" of two lines of ordinary writing done by the suspect.

B-2 shows six lines of ordinary writing of the suspect done at a different time.

Proof that suspect did the traced forgery is abundantly given in the fact that, in every essential particular, where X is seen, in X-over-R-1, to deviate from the exact lines of R-1, each deviation will be seen to be towards a shape or an outline or a curl or twist that is characteristic of the ordinary, natural, writing of suspect.

For example: In X-over-R-1, it will be noted that the upstrokes of the letter "u" in "Lucy" are considerably covered up by the pen coming down in the making of the two"stems" (or "downstrokes") of that letter; and that the two stems of the letter are quite "curved." And that, in contrast, the lighter lines of the X signature show that the upstrokes of the letter "u" meet the downstrokes (or stems) of that letter right at the very tops of the stems, the downstrokes never crossing or coming back on the upstrokes. Also that the two stems of the letter "u" in X come straight down, making perfect vertical lines in their downcoming, and do not make curves as do the downstrokes in the "u" in R-1. Now, turning to the admitted writing of the suspect, we find that the letter "u" in "assure," in "Claude," in "Rush," and in Arthur" have the features of the "u" in X rather than those of the "u" in R-1.

Next, we note that the small "c" in "Lucy" of R-1 is made by having the terminal stroke of the letter "u" stop, about the height of its stem, and then make a twist downwards towards the left,—the letter "c" being made like a small letter "e" in ordinary people's writings. But in the lightly-written lead-pencil signature X, the terminal stroke of the "u" does not stop about the height of the letter's stems, but keeps on running up, to form with the downstroke of the letter "c" a letter "i." Now, turning to admitted writing we find the letters "c" in "Victor" and in "Lawrence" (B-2, lines 4 and 6) to be so distinctly UNLIKE the "c" in R-1 and so distinctly SIMILAR to the "c" in X.

Thirdly, we note in X-over-R-1, that the lightly-written pencil lines of the capital "R" in "Redding" show a distinct ROUNDNESS at the apex

of the letter, while in R-1 the corresponding part is plainly an ANGLE. Now, turning to the capital "R" in "Rigdon" and in "Rush" in B-2, we find the corresponding portions of the letters "R" to be LIKE that in X and UNLIKE that in R-1.

For a fourth instance, look how "closed" is the "e" in the X part of the picture X-over-R-1. It is quite a letter "I." Yet the "e" in R-1 is quite an "open" looped letter. Now, transfer your gaze to the two letters "e" in "appreciated" in B-1, and note how CLOSED are the loops of both letters—unlike R-1 and so much like X. Note, also, the fact that in B-2 there are twelve letters "e," and that all of them except the "e" in "Nelson" (Line 2) are decidedly "closed" as to their loops.

A fifth example will be found in comparing the letters "n" in X-over-R-1: This illustration, made by purely chemical-mechanical means (in which no human fingers were utilized with their consequent inclination to "humanly err), shows that the tops of the "n" in the BLACK lines of R-1 are quite sharp, while the tops of the "n" in the light lines are quite ROUNDISH (this applies more particularly to the FIRST top of the letters). Now, if we look at the top of the "n" in B-1, in either "tion," or "and" or "want," we find that it is decidedly rounded and not sharp. The same letter furnishes another marked CONTRAST, between X and R-1. Note in X-over-R-1 that the black "n" of R-1 has a markedly SHORT SECOND STEM, and that the TERMINAL STORKE of that black "n" twists off to the right at a pronounced sharp angle. Yet the corresponding stem of the lightly written "n" in X is decidedly LONG, and the terminal stroke of the pencil-written "n" goes off to the right,—away down below the base of the first stem of the same letter, at a graceful roundish curve, with a tail that is much LONGER than the tail of the terminal of the corresponding "n" in the black-outlined R-1. Now, look at the "n" in "want" in B-1 (for example). In "want" the "n" has a "nose" that is quite ROUNDED, like the X "n" and unlike the R-1 "n"; in "want" the "n" has its first stem SHORTER than its second stem, like the "n" in X and unlike the "n" in R-1; and the "n" in "want" has such an open-angled roundish curl to the terminal stroke, like the "n" in the lightly-penciled X, and so unlike the sharp-angled back-twisted terminal of the "n" in the dark-lined R-1.

Passing over the many, many other points in which the "traced" forgery X differs from the "model" signature R-1, as emphasized by the closely contrasted signatures as exemplified in X-over R-1, note, in conclusion, the finishing point in the respective letters "g": Note that while the lower loop of the "g" in dark-lined R-1 is quite SLENDER, that of the X "g" is quite swelled or "stout." And that the "g" in "Rigdon" in B-2 is quite swelled or stout like that of X. We also find that the very end of the "g" in R-1 is made with a decided twist downwards, finishing with a pronounced "tick," while in the penciled "g" that terminal finishes with a "petering-out," tickless stroke, with a tendency towards the top of the

page, and no evidences of tendency to the backwards. Then, look through B-1 and B-2 for a final "g" with which to compare X and R-1. And, not finding a "g" final therein, take the "y" in "Harry," the next best material for illustration and comparison: Here we find that the terminal stroke of the "y" is made NOT with a TICK and with a DOWNWARDS and BACKWARDS inclination, like the terminal of the "g" in R-1, but is made with a "petering-out" stroke with an inclination towards the top, like the "g" in forged signature X.

OAKLAND HIGH SCHOOL MEET

Photo by G. Allen Young

Taken at Idora Park, Oakland, California, with popular Pressman Camera, exposure 1-350th at f 4.5 on Eastman film pack

Boys diving -Neal Plunkett (nearest the water), Newton Houston, Bruce Cunningham

Note: "Our boys" were at this sort of thing more than a month ago. And the babies, too, were toddling our beaches with the froth of the surf tickling their toes, happy as the sunshine. We have a song, "California I Love Thee," we sing it, and we mean what we sing.

The Verito

By Sigismund Blumann

Without any intention of excuse or defense, but to give deserved value to what is in this text, I am prepared to attest before a notary that in this, in previous, and in future articles dealing with specific names, of things and of makers of them, I have received no favor or compensation, and hold no desire for either. Furthermore that in several cases I have bought in the open market things for which I had no other use than for the purpose of trying, experimenting and writing upon. That I am independent of the approbation or suspicion of readers and manufacturers and my compensation exists entirely in the pleasure it gives me to say what I wish.

Lest this appear too independent and insolent, let the reader know that a correspondent trying to be smart at the expense of truth, attempted to get into print an accusation that I was an ad writer. Now as a matter of fact, I am that, but no part of the photographic industry would find what service I could give them worth my price. And they have had the perspicacity and good taste not to try to subsidize me. So, as this gentle soul meant it, I am not an ad writer.

For years, as a novice, I read of certain abstracts dealt with vaguely. The photographic press, timid of seeming to favor certain firms, dared not name names. Thus we might read of Diffused Focus without at any time learning how we might also mush up our pictures. Writers were not permitted or had not the courage to write of the Verito, the Smith, the Portland, the Struss, but spoke in broad terms of uncorrected or partially corrected lenses.

After twenty years' eleemosynary contributing to annuals and monthlies, where to my surprise and gratification I was permitted to "shoot my mouth off" as unmodified truth and the spirit moved me, it was conveyed to me in many heart-warming letters that quite a number of readers recognized the truth and approved of frankness and sincerity. And I became more daring. Wrote of an Eastman product one time, shall write of a Wollensak product now, and probably of an Ansco product soon. So for the benefit of the skeptic, it is affirmed here and now that my Verito was paid for by myself and this article is for the benefit of the reader, and not the manufacturer.

The underlying principles of diffusing lenses are the same, broadly speaking. The differential factor being mainly one of degree, speed, and price. The excellence of the various makes is known. I speak of the Verito because having a Verito I have studied it, worked with it assiduously, and know something about it. It has proven its virtues and a good thing found deserves extolling, though this article shall not deal in praises.

No one has ever written about me except to roast me, and that roast I had to write myself, under a Nom de Guerre, as one might say. So having preserved myself, a sort of black beetle in self-made amber, we will proceed to the real matter in hand.

The Wollensak catalogue gives a rosy picture of possibilities when it says, "Working at full aperture, it renders a delightful atmospheric quality of softness, beautifully blending the highlights, half-tones, and shadows, and suppressing unessential wiry detail. Definition is not destroyed, but pleasingly subdued and softened."

Of this I was skeptical, having seen prints made at full aperture that looked smudged all over the paper. After careful test it must be conceded these artists had not only thrown the diaphram wide open, but had purposely racked out of focus. While at F4 my negatives were rather broad, there was definition enough to suggest solidity and however soft the general effect, the wonderful atmospheric quality of the high-lights made sometimes prosaic subjects to be quite pictorial. Devoting this portion of the article to negative making, let us accept as essential the Wollensak directions to expose on the full side as to time and develop with from one quarter to one half the amount of alkali in dilute Pyro (according to my judgment) or any non-contrast solution.

The rear lens alone gives portraits that are remarkable for roundness and perspective. It did not, in my hands, work so well on landscapes, but odd to say the front combination used singly, although not advised by the manufacturer, produced peculiarly effective pictures in the field. Furthermore reversing the elements, that is, screwing the front cell in back and the back in front, an entirely different lens came into existence that served to render newer effects. All in all this Verito is the most plastic instrument I own. It shows new possibilities with every whim I put upon it and gives all the pleasure of the limitless and unexpected.

But its great, pre-eminently first place is as an enlarging objective. As obedient as a brush and color in the painter's hand. The things I have done with this lens would startle the Wollensak scientists. I have stopped down sharp for part of an exposure and gradually opened to F4 and have gotten a novel diffusion. I have focussed at F4 and exposed, gradually reducing the aperture and have gotten an entirely different effect. They told me that it was impossible to get graduated diffusion, and graded planes if they were not in the negative, and I disproved the statement by dodging and varying the aperture for local exposures. My anastigmat refused to descend from its aristocratic place to lend itself to such tricks but the Verito, good fellow, shares every mood and lends itself to every wish. Think, fellow enthusiasts, what it means to dodge in an all too insistent dress and diffuse its lines to your heart's desire, then through a hole in the cardboard dodge in the face and make it just sharp enough. I have done these stunts with foreground, background, middle distance, trees, clouds, and water. If no Salon prize winners bear my name, it is

not the fault of the Verito. It supplies everything but the creative—and that too, it helps to bring. I shall make a picture yet.

The English water-colorists long had a way of rendering a softness to their work that made them famous. They "scumbled" by holding the finished picture after it had dried under a gently flowing tap. Somewhat as old timers used to correct over-contrast by exposing the unfixed print to faint daylight—a procedure known at the time as "sunning." The largest stop of the Verito serves this purpose; the exposure being made with F8 or smaller aperture for definition, a last fraction of the total time is given with the scrumbling stop. It is as if one learned, first, to enunciate clearly and distinctly and then sought emotional effects by inflection and varying qualities of sound in delivering an oration. The variety of ways in which this use of the rim of the glass may be made to create effects is almost unlimited.

There is the possibility of individuality. To keep one's fingers on the aperture flange and turn on and off the light, to shoot a little more diffusion into the picture, or even to expose sharply, then dodge all save one part of the picture and put soft lighting just there, is very like creating from raw material, a living, idealistic part of one's mood. It is handwork, art, if you will permit the dreadful word. It is conscious expression in terms of beauty, not at all the mere photographic duplication that comes through the camera lens.

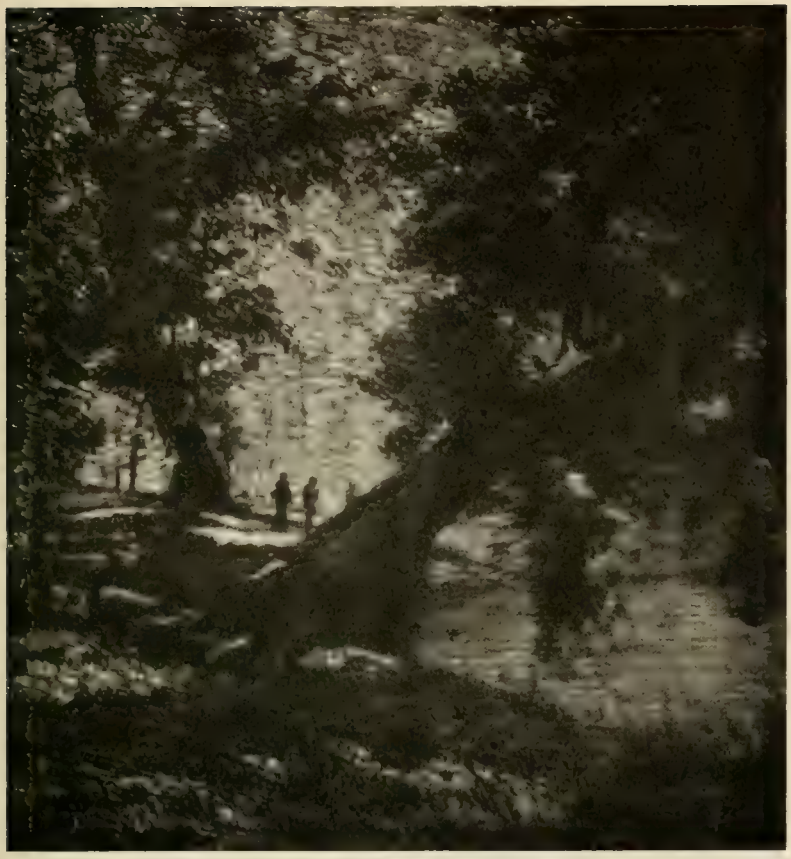
For portraiture no better objective is conceivable. It minimizes retouching and enables the photographer to make a negative that will give contact prints that are pictorial. The stops from F16 to the smallest constitute the Verito virtually an anastigmat.

Whether this be prejudice or according to the rights of the thing, I insist on a lens at least one size larger than the plate with which I work. Long focus lenses were always my hobby.

Carefully studied, the results are mathematical, like a painter's colors, —so much of this yellow with so much of that blue produces just this green. The worker at the enlarging apparatus works with a particular negative, he gives just so long an exposure with, let us say, stop 16 and for a flash or a second with F4 and notes the results. From this he works, varying the ingredients till the finished picture is produced. The artist in photography no less than in painting knows what he wants to say and works till he finds the best way to say it. And Verito offers the possibility.

Let the new owner of one of these instruments of expression be forewarned. It takes a week of real study to get an idea of the uses and ways of using so unique a contrivance. And once understanding the speed of progress depends on the individual, his aptitude and what degree of Divine Gift of artistic perception has been allotted him.

To all of which virtue can be added this,—that the Verito is a joy for all seasons. When Nature is propitious one may "hold communion with her visible charms" and capture those charms as no way else through such a glass as this.



DRAWN BY BOLTON BROWN
From Bulletin of The Art Center, New York

A Pictorial Problem

By Edgar Felloes

Perhaps, what incites the photographic pictorialist to strive again and again is his instinct for the beautiful, and the many problems that confront him in attaining it. The overcoming of these problems is to him a delight, it serves as a tonic. It shall be my aim, therefore, to treat on one subject, a shortcoming common in photography and known as "spottyness." More photographic pictures are spoiled by this than from any other cause, and the pity of it is that so many workers are wholly unconscious of it. No matter how happy our choice of subject, the picture will be seriously marred by indifference to this failing.

What then is spottyness? It is nothing more than permitting various portions of the picture to strike the eye at the same time. Spottyness destroys sequence, order; its result is confusion, jumble and doubt. Were we speaking of sounds we would say it is bedlam.

Take for example, the subject of sky and water, photographs are made of these objects by the million, yearly. Unless we take special precautions, the photograph shows the sky is white and the water reflecting it is also white. Yet take out the pocket-handkerchief, we presume it is white, compare it with the sky under any and all conditions; is the sky white? It is full of tones, never a hard and harsh wall of white as in the photograph and the water does not reflect what does not exist. So much for photographic truth, which is difficult to combat because of the almost universal belief in it, and this belief seems to have got under the skin. Thus we start out by being blind to actual fact and common reason.

In that picture that showed us the white sky and white water we have two spots, to overcome this we must do one of two things, either reduce the brilliancy of one or reduce its area. It is disastrous to your picture to have these two spots claiming equal attention, both calling out as it were "me first." Through this carelessness are we not placed in a dilemma; what joy is there in being in a dilemma? We can now realize how we fail at the start, in a pictorial sense.

Let us now suppose there were trees that partially cut up that white sky into smaller bright patches and the water too, reflected these patches, does that not lead to mental chaos? Where does art come in if "the man behind" is incapable of selection? The reflection in a mirror was never called art, but in good time the photographer came and with the aid of science he offered us a more or less truthful petrification of that image and he called it art; being a bold man.

There was excuse for this in the early days of photography. The whole thing was so marvelous that there was excuse for tempered judgment. We are getting bravely over this self indulgence, we are striving for what we believe is the worthwhile; it takes time, but we are moving ahead.

To make this little talk of practical use to those who may be interested, I have selected a picture, the work of an artist, from which something may be learned. A cursory glance at the illustration and we recognize at once the man behind it. Here is a well thought out composition. There is no accident, no luck in it. If any reader thinks this simple scene just happened so, that question will be left for his own answering, and if he does this for himself the lesson will linger.

The artist's thought was to present a wooded scene with light breaking in, and the means (the art) he employs to emphasize that thought and the pains he has taken to make that thought sufficiently appealing, will be our study. Try and visualize how this subject would look in a photograph. Would not that pool of water on the right have some distressing splotches of light, and under the circumstances would not there have been many patches of white blinking at us through the foliage of the trees? And then again, would not the sun's rays that dapple the foreground have glared in uncompromising brilliance with so much dark sur-

rounding them? Having determined in our mind about what we might expect from the photograph, we are in a receptive mood to note how an artist treats the like problem, and the reasons for so doing.

We must remember the artist had decided that his principle light should drift through the trees. Therefore if any light is to be reflected from the pond it must be greatly toned down, it is quite secondary. No matter what nature may show, art demands that the principle light should not be jeopardized by a repitition of equal brilliancy in the water. In consequence of this the water is toned down. Also notice, the patches of light glinting through the trees are also made subservient to the principle light so as not to challenge it and thereby divide one's attention. The patches of light in the foreground are also toned down for the same reason, but here the artist has had recourse to another method of dividing the areas, a method peculiarly adapted to his medium, but his intent is just the same.

Now notice how the artist has worked for his climax, by placing his brightest light in proximity to his darkest dark and there we have our keynote. I refer to the three patches of light near the little figures. The little black figures have their value also, by their color they enhance the light and by their size they give scale to the picture. Let it be noted these figures are small, a trick in art few photographers appreciate. With them the practice seems to be to at least have the figures recognizable and this generally leads to too great a prominence and to a dwarfing of the landscape. Besides this, we are sometimes in doubt of the pictorialist's intent as to whether the work is intended as a landscape or a figure composition. Figures in landscapes are really difficult to treat in photography because of the human interest, what we really need might be called a suggestion and photography does not lend itself to suggestion. It is necessary for us nevertheless to be aware of all shortcomings, for only by that means are we able to combat them.

It remains for me now to direct the student as to how he should overcome defects in his negative to secure a more artistic picture. I am convinced the only proper way to obtain desired results is to get it in our negative. The method some pursue in toneing down with crayon sauce or pigment I consider wholly illegitimate, it is not photography. The work to be done takes thought and time, but what is that to the real amateur? It should be a pleasure.

As our object is to reduce the over dense parts of our negative, we will have recourse to both chemical and mechanical means, and what I am about to say is the outcome of my own experience. The following reducer is generally known as Howard Farmer's Reducer and may be used as follows. Take the dried negative and immerse it in a tray of hypo made by dissolving one ounce of hypo in eight ounces of water. Leave the film or plate in this until the gelatine is thoroughly softened, this requires about ten minutes time. Now make a saturate solution of red

prussiate of potash. This may be kept on hand if stored in a dark place. The negative being sufficiently soaked add to the hypo solution a few drops of the red prussiate of potash to secure a pale lemon color and then return the negative to this mixture and watch it closely, being careful to remove the negative a little before the required reduction has been reached. Washing the negative in running water will stop the reducing action. To hasten reduction more of the potash solution may be added, an excess of it, however, causes stains. This is how the bleacher is used for general reduction and the operation should be carried out in subdued daylight. To apply the reducer locally a brush of suitable size is used and fresh applications of reducer are applied and rinsed off until the effect desired is attained. It is difficult at times to so confine the little puddle of reducer just where we wish it and there are occasions when the reduction must be confined to an accurate shape. When this is the case, I have recourse to a protecting varnish of celluloid, it is easily made. Remove the gelatine from some old films with the aid of hot water, then dry the film, cut it into strips which place in a small bottle and add a sufficient quantity of Amyl Acetate, sufficient to cover and permit the celluloid to dissolve. What we require is a solution of creamy consistency, which is secured by either adding more strips of celluloid or by slightly increasing the quantity of acetate. If we now use this varnish, which is applied with a brush over those portions of a dry negative we wish to protect, we shall find it of great advantage. The varnish is easily applied as it does not dry rapidly and the worker will not have any difficulty in spreading an even coat of it. I need hardly remind the photographer when painting on the varnish to exercise care in approaching the outline, and also to give sufficient time for the varnish to thoroughly dry before subjecting the negative to the reducing bath. Here is one little kink the worker should remember, that is, to use the potash weak, the reason of doing so is to permit of a slight softening of the edges protected by the celluloid. It is better to take time than to push the work along with an overstrong reducer.

The mechanical process of reducion is by friction, this is useful for small areas. Simply dip absorbent cotton into alcohol, roll it into a little wad and work it over the dense portion of the dry negative with a circular motion. Keep the cotton damp and renew it frequently as it blackens. For the treatment of very dense portions use flour of emery and a little sweet oil, this will hasten matters, then finish that portion with the alcohol and cotton.

After these treatments the negative will not look so pretty as it did at first, but what are we working for, a good looking negative or a more artistic picture?

If desired, the varnish may be removed from the negative with amyl acetate applied with cotton.

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The Lens Speed

"SAME STOP VALUE CALLS FOR SAME EXPOSURE WITH ALL TYPES OF LENSES"

We are reprinting here under the same caption an article that appeared in the March issue of Kodakery. We have answered this question times out of number in our mail, and we shall probably have to answer it for the rest of our life; but here, an opportunity presents itself to do this answering wholesale, and we wish to acknowledge our indebtedness to the writer of this article for putting the point so clearly.—E. F.

When we speak of the so-called "speed" of a lens we refer to the f. value of its largest stop. The f. value is the relation that exists between the diameter of its effective aperture and its focal length. If, for instance, this diameter is 1 inch and the focal length is 8 inches, the f. value is 1 divided into 8. This is called f.8.

The "speed" at which a lens works is determined by the amount of light that it transmits to the film, and while this depends on several factors, some of the light being absorbed and some reflected by the lens, yet for all practical purposes we may regard it as being determined by the f. value of the stop used. The larger the stop the more light the lens will pass and the shorter the exposure that needs to be given.

The largest stop on a meniscus, which is a single lens, is smaller than the larget stop on a rectilinear, which is a double lens. The largest stop on a rectilinear is f.8 (U. S. 4).

An f.7.7 anastigmat is nearly 8 per cent faster than a rectilinear, an f.6.3 anastigmat is about 62 per cent faster, and an f.4.5 anastigmat is about three times as fast as a rectilinear, but it must be remembered that when any anastigmat is stopped down to, say, f.8, it works at f.8 speed, and it is then necessary to give the same exposure with the anastigmat as is needed with any other kind of lens that is used with stop f.8.

The rule is to give the same exposure with all kinds of lenses when the stop used on each has the same f. value. When it is desired to give a shorter exposure with an anastigmat than with other lenses the anastigmat must be used with a larger stop than the other lenses.

For the Professional

In the Interest of Commercial and Portrait Photographers

Photographers' Association of California

The monthly meeting and dinner of the Association took place at the Hotel Bellevue, commencing at 6.30 p. m., on March 12th. There were 49 members present at the dinner. When the clatter of knives and forks had ceased, the chairman said:

"I am glad to see that so many of you have kept your promises made at the last meeting, which accounts for the fine display of photographs to be seen around the room. I think, perhaps, I had better call on Mr. Scharz, who has acted as chairman of the Photograph Committee, to say a few words in connection with it."

Mr. Scharz: This is the first time that I have ever stood up to make a speech to an audience. I wish to say that I am satisfied with the show of photographs, which indicates that a little more interest has been taken in the organization than some of us expected. All it needs is just a little more kick behind, and, if we each one of us do our part, and create a general atmosphere of goodwill, we will fully justify the existence of the organization. As photographers, working in this highly organized business world, we owe it to ourselves and our own self-respect to be members of an organization of this kind; in fact, I do not see how we can get the esteem and the respect of the other industries in the world without an organization of this character. By belonging to an organization like this we have nothing to lose and everything to gain. (Applause.)

The chairman then invited the members to inspect the exhibit, and Mr. Lancaster suggested that a really critical view of them should be taken, for mutual benefit. On again taking their seats:

Chairman: I am sorry that both our secretary and treasurer are sick and unable to be with us. Mr. Whyte, who has so ably reported our last three meetings for Camera Craft, has consented to act as secretary for tonight. And, for the reason that our secretary was taken ill so suddenly this morning, we have no report here of the last meeting. A reference to Camera Craft, however, will enable any of you to learn what was done at that meeting. The first procedure this evening will be a roll-call of those present; and I would suggest and ask that, as the roll is called, each of you indicate some non-member whom you are willing to look after and be responsible for bringing into the Association. This would be particularly welcome in regard to this side of the Bay. From the East side of the Bay there appears to be a very good representation. Mrs. Clarke suggests that if you do not know of anyone whom you would like to bring in you might get the name of a prospective member from someone else.

In response, those present announced in turn their names, business specialty, and, where possible, the name of a prospective member, with the understanding that they would do their best to induce the prospect to join the Association.

Mr. N. D. Siller (Hirsch & Kaye): I am satisfied that the best means of obtaining new members is by personal contact and getting them in touch with the Association.

The Chairman: The thorough and well-reported proceedings published in Camera Craft are doing us a great deal of benefit in this very matter of personal contact.

Mr. McGovern placed a great value on a price list which might be made up for the guidance of members, and spoke very highly of the exhibits and the largeness of the display and the benefit to be derived.

Mrs. Morrison advocated the appointment of a reception committee, the lack of it being somewhat embarrassing to comparative strangers.

Mr. De Gaston, for the Committee on Ethics, reported that he had been too busy to call a meeting, but would have a report for next meeting.

Mr. Terkelson, for the Committee on Prices, only reported progress for the present, as he had found it a somewhat delicate question.

Mrs. Clarke expressed the opinion that the most important thing to be done now was to get members so as to get the National Association to California and San Francisco. Get members first, then cooperative advertising will be possible, and then see that the National Association comes to California.

Mr. Ralph Young, for the Publicity Committee, gave a very fine report, indicating continued activity on his part.

Later in the evening Mr. Young read a very amusing skit on the experiences of the photographer's victim.

The Chairman: Under the head of something for the good of the Association, I will call upon Mr. Blumann, who gave us such a splendid talk last time. (Applause.)

Mr. Sigismund Blumann, who was received with hearty applause, spoke at some length and very interestingly to the members present as photographers, but intimated that it was not for publication.

Mr. Blumann's talk led to a very lively discussion on the floor, during which Mr. Blumann was asked several important questions, which he answered fully and tactfully.

Among those who took part in the discussion were Mr. Terkelson, Mr. Peterson, Mr. Moore, Mr. Loders, Mr. Weller, Mr. McGovern.

The Chairman: The National Association will be held in July. We need to look to the appointing of delegates to find out who are available. If we are going to make a bid for the convention of 1924, we must have a delegation there who will be able to present that bid. We have one offer tonight. Camera Craft will send a delegate.

Miss Ida M. Reed: Camera Craft will be represented there, and Mr. Anderson from this Association will be paid entirely by Camera Craft. We should send at least two other members, and another member who will pay his own way; we ought to have four.

The Chairman: That is very generous of Camera Craft to represent this Association in that way. If there are any members here who contemplate going, I think they might let that fact be known, so that we can have as good a representation as possible.

Miss Reed: If we were not sending Mr. Anderson, I would ask for volunteers and pass the hat.

The Chairman: We must get on to that phase of the business by next meeting night.

Mr. Lancaster suggested that, at each meeting night, a subject should be chosen for the next night, and that each member should bring along one or more pictures of that subject for comparison and criticism.

The chairman adjourned the meeting at 10.30 p. m., to meet again at 6:30 p. m. on the second Monday in April.

The loan exhibition of prints was a very creditable one, especially when it is remembered the pictures were brought together on such a short notice. There were 150 pictures assembled on the walls at this meeting, and it is planned to send this loan collection to the various towns desiring them for exhibition purposes.

Mr. R. E. Scharz, photographer, 473-14th street, Oakland, is chairman of the exhibition committee, and Mr. Scharz advises us that Mrs. Edna M. Morrison of Visalia has already signified her wish to exhibit this collection in her studio, and we understand it is Mrs. Morrison's intention to invite photographers in and around this section to view these pictures.

There are many other communities to be heard from, and it is suggested that those interested in this project make application to Mr. Scharz that dates may be fixed for the collection to be forwarded to them.

On the following page will be found a report of the doings of The Photographers' Association of the Pacific Northwest.

Photographers Association of the Pacific Northwest

(Affiliated with The Photographers Association of America)

Office of the Sec'y.

Seattle, Washington.

The Photographers of the Pacific Northwest will hold their 1923 Convention in the beautiful city of Victoria, B. C., Vancouver Island, Canada, beginning the 28th day of August, and ending the 31st day. Victoria itself is without a doubt the coast's most ideal convention city and photographers generally agree that it will be well worth their time to attend.

The Victoria photographers have for several years maintained a very active local association and they as a reception committee will see that visitors are well entertained. Mr. Wilfred Gibson of Victoria, the President of the Pacific Northwest Association in charge of the 1923 convention, will not leave a stone unturned in the preparation of this convention. Already Mr. Gibson has set the wheels turning and a tentative plan has been drawn up, not only for a social gathering, but for the following which will be entirely new: Model dark rooms which will include both portrait and Kodak developing and paper printing. With the aid of leading and progressive manufacturers these rooms will be fitted up with every possible new photographic equipment which has been put on the market in the last few years. This equipment will be used by the manufacturers' demonstrators in all their work. Each visiting photographer will have the chance to view this in actual and under practical working conditions, and if preferred will be allowed to try them out himself.

Not only has the above been planned, but a model Camera room will be fitted in the same manner, with all makes of photographing lights and cameras, not to mention back grounds and lenses.

These rooms will be of such a size that all visitors will be able to view the tests or demonstrations. Each exhibitor will be given ample time on the program to work and explain why his product is the best for your special requirements.

It is believed that such demonstrations will be the means of bringing the manufacturer, dealer and photographer to a better understanding and put in use helpfull and practical equipment.

In order to make this feature possible, the Association officers will select three manufacturers representatives to assist in the hall arrangement and arrangement of the program as well.

The Secretary of the Photographers Association of America has awarded what is said to be the largest and best International Exhibit collected in years, and will be on exhibit together with displays from every progressive Northwestern photographer. A few more words may be said about this International display: In the last two conventions held in the Northwest it was impossible for the National Association's Secretary to send the complete exhibit due to the fact that the date on which their convention or National convention was held was just about the same time as the Northwest convention, however this year, the two conventions will not conflict and therefore the entire exhibit will be here.

While the Eastman Kodak Company has not consented to send us Mr. Harry Wills as an added attraction to the Northwest convention, the officers hope that he will be present to tell us how he makes his wonderful negatives in open demonstration and in our model camera room. This is only one big attraction which is being lined up and no really live photographer can afford to miss this.

In closing let me say that no manufacturer can afford not to have his product on display at this convention, therefore, let the man in charge of your sales study this Northwest territory carefully, he will find that something he is making is not being sold in the five states covered by this convention; if his product has merit, it certainly should be displayed and when demonstrated will sell. If it is impossible to display it then advertise it in the convention program, which will be seen and read by every photographer in the Pacific Northwest.

Photographers of the Pacific Northwest, namely Idaho, Montana, Oregon, Washing-

ton and British Columbia, if you are not a member of this Association join today and help your Secretary finance this great project. Write or ask your nearest stock house for information or write J. A. Zinn, Jr., Secretary, 1404 Second Avenue, Seattle, Washington.

You will find here published the State officers for your state, meet him, make suggestions, and by all means JOIN and ATTEND the convention.

OFFICERS 1923

Wilfred Gibson, President, Central Building, Victoria, B. C., Canada.

Ora L. Markham, Vice President, 386½ Washington Street, Portland, Oregon.

J .A. Zinn, Jr., Secretary-Treasurer, 1404 Second Avenue, Seattle, Washington.

Chester M. Coffey, Oregon State Vice President, Union Block, McMinnville, Oregon.

Fred Jukes, Washington State Vice President, Sunset Block, Bellingham, Washington.

Philip A. Brainerd, Montana State Vice President, 220 Fourth Avenue, Havre, Montana.

Charles F. Paschal, Idaho State Vice President, 217 E. Third Avenue, Moscow, Idaho.

John Vanderpant, British Columbia Province Vice President, 657 Columbia Street, New Westminster, B. C., Canada.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

New Desensitisers

It is somewhat more than a year since the process of desensitisation—the outcome of a long and tedious research by Dr. Lüppo Cramer—was introduced to readers of "The British Journal of Photography." The interest which has been taken in the subject throughout the world in the interim affords sufficient justification for an attempt to "report progress."

In this country the solution "Desensitol" has enabled photographers to try out development of highly sensitive plates in bright light, and so satisfy themselves of the merits of the invention. Within the last six weeks a well-known firm of plate makers has announced the manufacture of plates backed with desensitising composition, thus simplifying the application of the process and placing it at the disposal of all to whom the making up or dilution of solution constitutes "too much trouble." In France photographers have had at their disposal a choice of desensitising agents of varying efficiency, some of which do not suffer from the staining tendencies of phenosafranine. There seems to be no room for doubt—at least, as far as reduction of sensitiveness is concerned—that phenosafranine is the most efficient substance hitherto available, and its adoption by the photographic section of the Japanese Air Force is practical testimony to this contention. Anyone who has used this dye, however, must have been struck by the extraordinary staining power of even a 1 : 5,000 solution; if such a solution be employed as a desensitising bath before development it is very difficult to remove the last traces of dye from the film by simple washing, especially if the glass of the negative has been coated with substratum of tanned gelatine in the process of manufacture. The multitude which uses film is virtually debarred from the advantages of the desensitisation by phenosafranine, the two gelatine coatings or the substratum necessitating so long a washing that softening and frilling more than counterbalance the advantage of being able to manipulate the development by lamp light or candle light.

The direction of progress, therefore, clearly lay in the production of a colorless, or at least non-staining, desensitiser, and whilst, no doubt, research workers in this

country have been experimenting with this end in view, their efforts have not been successful as those of our late enemies, the Germans. This could scarcely be otherwise; for, whilst our dye manufacturers have been fully occupied in making products which were exclusively manufactured in Germany before the war—products which have been dealt with in bulk and which have been urgently required for our textile industries—the chemists of the latter country have been able to devote their research time to the investigation of the more out-of-the-way properties of hundreds of dyes and intermediates already on their shelves.

The world-renowned photo-dye chemist, Dr. König of Höchst-a-Main, who collaborated with Dr. Lüppo-Cramer in the work on phenosafranine, has continued his investigations and has discovered entirely new classes of products, which are as efficient as phenosafranine as desensitisers, and some of which are colorless. Others, though colored, have been found to be without staining action on gelatine or on the fingers of the operator; most promising results it must be admitted, but there are at least two other properties which must be possessed by an efficient desensitiser, viz., ready solubility and non-interference with the ordinary course of development. The writer has already called attention to the fact that with certain developers phenasafranine exerts a pronounced retarding action, while the hydroquinone the characteristic pause between pouring on the developer and the appearance of the image vanishes—in fact, hydroquinone as a developer, either after a preliminary desensitising bath of phenosafranine or as a mixed developer containing phenosafranine behaves exactly like metol.

By the courtesy of Dr. König the writer has been enabled to test the two products which are at the moment considered the best obtainable. They have been labelled by their discoverer "Pinakryptol" and "Pinakryptol Green," and, whilst the former is a mixture of a colorless with colored non-staining substance, the latter is a pure green-colored substance, almost devoid of affinity for gelatine, skin, etc. The test results are of sufficient interest perhaps to warrant publication, if for no other reason than that they indicate how near to the ideal research is bringing us.

Pinakryptol

This is a dark greenish-grey powder, the larger proportion of which is only soluble with great difficulty even in 5,000 times its weight of warm water. As it does not appear possible to prepare a stronger solution than 1 : 5,000, one must either be able to weigh out exceedingly small quantities or deal with large volumes of solution. One would naturally choose the latter method of working, and so minimize the risk of spoiling sensitive material by reason of flying specks of the dry Pinakryptol. The 1 : 5,000 solution, which is of a turbid grey-green character, can be used either as a preliminary bath —immersing the plate or film therein for not less than one minute in the dark before proceeding to development in a full red or orange light (or by candle light) —or 25 per cent by volume of the Pinakryptol solution may be added to the usual developing solution, and the first 1½ to 2 minutes of the developing operation be conducted in a "safe" light.

Desensitising Efficiency—The writer has only tested this desensitiser according to the former method so far, and has found that the reduction of sensitiveness with a Kodak super speed portrait film is of the order of 1/1,100; it is, therefore, of somewhere about the same efficiency as phenosafranine. Experiments with a panchromatic emulsion indicate that the Pinakryptol is at least 1½ times as efficient as phenosafranine in desensitising for the red end of the spectrum.

Staining Tendency—The almost complete lack of affinity between the small proportion of green substance which is present in the larger proportion, lead to a finished negative, even on film base, which after five minutes' washing in running water, is quite free from stain. A marked advantage over phenosafranine is thus evinced. It will be obvious also that Pinakryptol may find application in stand development, there being no objection to prolonged immersion in a bath containing this desensitiser.

Development Effects—These can be most conveniently stated in a tabular form, and they will therefore be given along with those evidenced by Pinakryptol Green, at the end of this communication. It is only necessary here to point out that a retardation of development is caused by desensitising with Pinakryptol.

Pinakryptol Green

This product comes on to the market in small, granular crystals, which exhibit a green appearance by reflected light. It has the characteristic appearance of what are commonly termed "basic" dyes. It is fairly readily soluble in water, and a 1 : 500 stock solution of an intense green color can be conveniently made up and diluted 1 : 10 for use as required.

Desensitising Efficiency—Used as a preliminary bath 1 : 5,000 for one minute on Kodak super-speed portrait film, the sensitiveness was reduced to 1/1,500, it is thus a more efficient general desensitiser than either phenosafranine or Pinakryptol. Like these products it may also be combined with the developer, in which case five to ten minims of the 1 : 500 solution should be added to every fluid ounce of the developing solution and the development conducted in a safe light during the first minute. The desensitising action of Pinakryptol Green on a panchromatic emulsion is of the same order as that of phenosafranine for blue light, whilst for green, yellow and red light the depression of sensitiveness is so great that no developable image was produced in the tests made by the writer by the action of lights sufficiently strong to give pronounced effects on a phenosafranine-bathed plate.

Staining Tendency—The color of the 1 : 5,000 solution of this product is so intense a green that pronounced staining of the gelatine is naturally looked for; whereas, as a matter of fact, there appears to be no staining whatever, the only discoloration which is noticed when the film is removed from the developer is that due to the green solution soaked into the film. It is removed at least as readily as the fixing bath products; ten minutes' washing in running water being ample to give a colorless negative, even on N. C. film base, which is coated both back and front with gelatine. Moreover, dishes are quite unstained by the solution, which in tne full red or orange light of the workroom can be most conveniently handled owing to its apparent black color.

Development Effects—These will now be expressed in tabular form, including, for reference, the results obtained when a 1 : 5,000 bath of phenosafranine is used as a preliminary desensitising bath. All the tests were made on super-speed portrait film, the exposure to screened electric light being the same for each section of film, which was placed in contact with an Eder-Hecht Goldberg wedge photometer. The developers were used at a temperature of 65 deg. F., and the control film, which is designated as having been subjected to no desensitising bath, was immersed in the desensitising solutions previous to development.

Hydroquinone Developer—

A.—Hydroquinone	1 oz.
Potass. metabisulphite	1 oz.
Potass. bromide	1 oz.
Water	to 40 ozs.
B.—Caustic potash (sticks)	2 ozs.
Water	40 ozs.

Equal volumes A and B are mixed for use.

Desensitising Bath	Time of Appearance Sec.	Total Time Min.	Total Time Sec.	Watkins Factor	Notes
None	30	3	0	6	
1 : 5,000—					
Phenosafranine..	2	2	0	60	The four results are practically identical in amount and contrast of image.
1 : 5,000 —					
Pinakryptol	12	2	36	13	
1 : 5,000—					
" Green	2	2	0	60	

Metol Hydroquinone Developer—

Metol	15 grs.
Hydroquinone	60 grs.
Sodium sulphite (crystals)	1½ oz.
Sodium carbonate	1½ oz.
Potass. bromide	4 grs.
Water	to 40 ozs.

Desensitising Bath	Time of Appearance Sec.	Total Time Min.	Total Time Sec.	Watkins Factor	Notes
None	20	4	0	12	Normal contrast.
1 : 5,000—					
Phenosafranine	20	4	0	12	Slightly weak.
1 : 5,000—					
Pinakryptol	60	4	30	4½	Slightly weak.
1 : 5,000—					
" Green	20	4	0	12	Normal contrast.

Pyro Developer—

A.—Sodium sulphite (cryst.)....16 ozs.
Sodium carbonate (cryst.)..16 ozs.
Water .....to 80 ozs.

B.—Pyro ..... 2 ozs.
Potass. metabisulphite ..... ¾ oz.
Water .....to 80 ozs.

Desensitising Bath	Time of Appearance Sec.	Total Time Min.	Total Time Sec.	Watkins Factor	Notes
None	25	5	0	12	Normal contrast.
1 : 5,000—					
Phenosafranine	12½	2	30	12	Appreciably weak.
1 : 5,000—					
Pinakryptol	35	5	0	8½	Appreciably weak.
1 : 5,000—					
" Green	12	2	25	12	Slightly weak; image of greenish color.

Action on Latent Image

The action of these desensitisers on the latent image was also investigated, and it was found that there is no destruction whatever caused by either Pinakryptol or Pinakryptol Green, even if prolonged action of the 1 : 5,000 bath is allowed. The very pronounced retardation of development caused by Pinakryptol might lead one erroneously to conclude that some destruction of the latent image is caused by this desensitiser. As a matter of fact, the "threshold" values of two negatives—one of which was developed after a given exposure without a preliminary desensitising bath and the other developed after a similar exposure, followed by two minutes' treatment with a 1 : 5,000 Pinakryptol bath— are identical. There need be no misgivings, therefore, on the question of interference with the "speed" of a given plate or film by desensitisation with either of these new products. If Pinakryptol is used, it is only necessary to prolong development by something like 25 per cent to 30 per cent in order to obtain a negative of normal contrast. The writer, however, prefers to use Pinakryptol Green. But is at liberty to make his own experiments and choose for himself, for the products may be obtained from Messrs. A. Connell and Co., of Bevis Marks, London, E. C.— this is a free country, and every worker Raymond E. Crowther in B. J. of Photography.

Art and the Crafts

A Department Devoted to the Encouragement of a Closer Relationship Between Photography and the Fine Arts

The Tree in Mid-Distance

In the last number dealing with this section I endeavored to show that trees when occupying the foreground plane became of necessity a determining element in a composition, when viewed from the standpoint of design. When the tree is removed to the mid-distance it still retains some of this power, but it may enter into a new relationship and become the picture itself. A foreground tree is a tree seen in part. Examine the illustrations accompanying the last issue, and it will be seen that in no case do we obtain a full concept of a tree as an entity. Let now a tree be removed to the mid-distance, and its proportions as a whole come into view, and it acquires individuality, becomes a thing in itself. It may simply be an object of beauty, charming by its outlines, or reflections of light and shade; it may give a "stimmung," a mode of feeling, sombre, joyous, or tragic to the picture; or it may take on a yet higher quality of itself, being the embodiment of an idea. Such a thought is conveyed by the tree in illustration, which lowers like a vulture, a spirit of evil, over the desolate landscape. This attribution of human qualities is as old as art, at least as poetic art. Now if trees are to fill this highest of positions in a picture, then they will demand isolation for themselves and subordination of competing masses. Turn to that glorification of the spirit of the oak that has made William Kieth famous, and notice how the competing elements of the composition are eliminated. Foreground that from the standpoint of truth to nature must have exhibited sharp, and therefore obtrusive,

detail are mellowed into a simple framework leading to the mid-distance tree or trees that are the purpose of his painting; and this always with such skill that the wrong done to nature (though not to natural vision) is unremarked. These considerations indicate what should be sought when trees are photographed in this plane for pictorial effect or use by artists. There should be sufficient isolation to secure the full characteristics of the tree. It should be remembered that the same tree may exhibit very different qualities in different stages of growth, or locality, thus the

Monterey cypress, that most gnarled, mystic looking of trees, when growing on an open plain, and young, may have the appearance, at a little distance, of a palm tree.

To sum up, mid-distance trees must exhibit the qualities of the tree, and they must have atmosphere and setting to back up their purpose as the subject matter of the picture.

H. DARCY POWER.

Developer for Line Work Giving Extreme Contrast

We are indebted to Mr. G. Archer Lindsay of Howland & Dewey Co. for the following formula. Mr. Lindsay declares this developer gives extreme contrast and also has excellent keeping qualities. We therefore recommend it with confidence to all desiring a special developer for a special purpose.

A certain photographer of our acquaintance found this developer, when diluted, capable of giving him perfect lantern slides, and he is loud in praise of it.

A

Water	20 ounces
Hydroquinone	1 "
Bi Sulphite of Soda	1 "
Bromide of Potash	1 "

B

Water	20 ounces
Caustic Potash	2 "

For use take A, 1 ounce, B, 1 ounce, and dilute with 1 ounce of water. For less contrast, use more water.

Our Book Shelves

Installment Sales and Collections

By Bryant W. Griffin

Manager New Business Department of the Gothan National Bank of New York

Prentice-Hall Inc. 205 pages.

The subject is tenchnical and almost forbidding. One would scarcely look for human interest under such a heading, but just inside the cover is this inscription:

"Business is original and constructive. The teacher teaches what was taught him; the preacher expounds from a book two thousands years old, full of the truths of life, and hoary with the age of twenty centuries; lawyers follow precedent. The business man has the world before him."

And the Dedication is a gem of unaffected sentiment. Read it here:

DEDICATION

This book is affectionately dedicated to my

DARLING LITTLE BOY

an assiduous collector of marbles, pieces of zinc pipe, dolls and teddy bears; but not money.

When he grows up he is "going to work in the office like his 'Daddy'," and I believe he may be a collection man, but of the old school, for he told me this morning what he would do to me if I didn't hurry up and tie his shoe.

So one approaches the text prepared to find that the author has approached his thesis as a man and not a machine. That there will be found interesting and sympathetic narrative to illuminate the formal matter. And one is not disappointed.

The book is comprehensive and exhaustive. It covers everything from letter writing to credit systems and from business psychology to law. It tells when to write and when to phone. Nothing seems to have been overlooked. And the style is charming. The impression is forced on the reader that if all collection managers had the personality of Mr. Griffin, it would be hard to refuse payment and pleasant to meet the obligations that too often are slammed at us like insults.

Many men in the important positions of Credit Men and Collection Departments will learn from this volume how to pursue their duties painlessly and for all the denaturing, more effectively. And heads of all sorts of concerns may find within the covers such information as will teach them what to expect from their own executives and from the Credit and Collection Departments of the firms with which they deal. S. B.

Making Your Camera Pay

By Frederick C. Davis

This very readable and valuable little book of 100 pages is the work of a practical man. As a writer on photographic subjects on which he is well qualified to speak, Frederick C. Davis can be relied upon for correctness of his information.

There certainly never was such a demand for pictures suitable for illustrative purposes as exist now. It does not signify if the product comes from the professional or amateur, if it meets requirements, it sells.

"Making Your Camera Pay," is worth reading by every one who has learned to handle his camera. Opportunity comes unbidden. If it smiles on you be ready at least to know what to do with it. Many devote their lives to the pursuit of catering to the pictorial needs of publications, a strenuous life at times but not a monotonous one, hence its appeal.

They say, one must have a nose for news to be successful, much of this can be cultivated and for this purpose the author gives a chapter entitled "What to Photograph," then follows an important subject under the title "Size, Shape and Form." And this gives place to such interesting matter as "Where to Sell" and "A Survey of Markets," also "Shipping Product to Market," and other items of importance are equally well treated.

To the beginner we would say, better study from this book than try to arrive at results by experience alone. Experience is fine but costly, for some, it has proved dreadfully discouraging. "Making Your Camera Pay," by Frederick C. Davis, published by Robert M. McBride & Co., 7 West Sixteenth St., New York, N. Y. Price, $1.00.

Pictorial Photography of American

We have received this pictorial volume and are delighted with it. The pictures shown, strike us as being of a higher average than in the two previous volumes and we can heartily recommend the work to those who have an interest in pictorial photography and desire to collect selected examples of the year's work. Not all photo pictorialists can attend the various salons now becoming so popular in the principal cities of the country, but all may collect many interesting souvenirs of the most striking works of a season. Thus they may at their leisure assimilate what to them appears to be the best of the collection.

We do not get far in our studies if we study alone. We need the example of others to spur us on and to teach us how other workers attack and often overcome the difficulties that beset us. The collection of pictures brought together and printed in Pictorial Photography of America are well worthy of our careful consideration and those that have given so freely of their time to make this undertaking possible, are entitled to steady support.

To Jerry D. Drew, Chairman Publication Committee, is especially due great credit for the successful outcome of this creditable work, copies of which may be secured price $3.00 per copy, by addressing Chairman of Publication Committee, Pictorial Photographers of America, 63 Cliff Street, New York.

The Exhibition Print

Photo Miniature No. 188, will be of interest to those photographers whose particular bent lies in pictorial photography. This particular number is the work of the well known exhibitor Mr. Ben. J. Lubschez. We would direct the reader's attention especially to plates four and five, these illustrations will show the student how pictorialists have recourse to a very much reduced angle of view to enhance pictorial effect. Many photographers would hardly have the heart to cut down the picture as shown in plate four and enlarge a very small portion of it to secure the picture shown in plate five, yet it will be generally admitted that the latter picture is preferable to the former.

There is much information packed in the pages of this work and it should prove very helpful. "The Exhibition Print" may be secured from your stock-house or Tennant & Ward, publishers, 103 Park avenue, New York; price 40 cents.

Preparing for Trials Involving Forgery

Those who have equipment to make photographic negatives for use of attorneys in court trials will be glad to read the latest book of Handwriting Expert Chauncey McGovern, entitled "Preparing for Trials Involving Forgery." In this brochure, which is retailed, postpaid, by the author at one dollar the copy, the use of photographic illustrations of all kinds of documents in dispute is particularly emphasized. Inasmuch as Expert McGovern enjoys a world-wide reputation, his ideas as to the wonderful assistance which lawyers can obtain from photographs should be known and quoted frequently to the clients of every photographer who has lawyers on his list of customers. Preparing for Trials Involving Forgery, published by Chauncey McGovern, 901 Hearst Building, San Francisco, Cal. Price $1.00.

When quality, honesty in price, and the ideal of service back up a product in the competitive market, there is nothing in the world that can keep it from going over the top.—Bottles.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.

If there is no officer in your State, address the General Secretary

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

STATE SECRETARIES

California—A. E. Davies, 1327 Grove St., Berkeley.
Colorado—H. E. High, 1023 Champa St., Denver.
Idaho—Eugene Clifford, 902 9th Ave., Lewiston.
Iowa—Harry B. Nolte, Algona.
Kansas—H. H. Gill, Hays City.
Louisiana—Samuel F. Lawrence, 1754 Laurel St., Shreveport.
Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.
Missouri—J. F. Peters, Room 408, Union Station, St. Louis.
New York—Louis R. Murray, 927 Ford Street, Ogdensburg.
Oregon—F. L. Derby, La Fayette.

ALBUM DIRECTORS

Alabama—G. H. Brown, Box No. 333, Florence.
Canada—C. Deyo, care Denike Drug Co. Ltd., Amherstburg, Ont., Canada.
Colorado—O. E. Aultman, Plested Bldg., Trinidad.
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Texas—J. B. Obeim, P. O. Drawer M, Henrietta.
Utah—John C. Swenson, A. B., Provo.
West Virginia—William E. Monroe, Box 298, Point Pleasant.

NEW MEMBERS

5241—Edgar F. Clark, Box 60, Alpine, Calif.
3¼ x 5½ Azo of mostly views from this section; for Northern California and National Parks. I desire to exchange only unmounted prints. Class 1.

5242—Alvin Wyckoff, 1577 Gower St., Hollywood, Calif.
4 x 5, 3A, 5 x 7, and 8 x 10 Azo, Velox, Seltona, Solio of views and publicity shots taken during the making of a motion picture; for anything of interest and merit. Class 1.

5243—Roman Macias, Morelos 12, Navojoa, Son., Sonora, Mexico.
3¼ x 5½, 5 x 7, and 8 x 10 Azo, Artura, Defender of Mayo's, Yaqui's and Indian pictures, landscapes, and miscellaneous; for girl poses and landscapes. I desire to exchange only post cards and views. Class 1.

5244—U. A. Donati, 421 West Central Ave., Albuquerque, New Mexico.
3¼ x 4¼ to 5 x 7 of Indians and Indian village; for female models in undraped artistic poses. I desire to exchange double weight prints only. Class 1.

5245—Thos. J. Walsh, Jr., 5418 Wayne Ave., Chicago, Ill.
3¼ x 5½ and 2¼ x 3¼ Cyko, glossy, of typical amateur (tyro) work, scenes in and about Chicago; for general, both domestic and foreign, and especially landscapes and seascapes and figure studies, mostly undraped or semi-draped. Class 1.

5246—W. J. Douglas, Halfway, Oregon.
2½ x 4¼ and 3¼ x 4¼ Velox of mountain and snow scenes; for anything of general interest, am interested in foreign scenes. Class 1.

RENEWALS

4964—Leo MacDonough, 1103 Detroit, Toledo, Ohio. Class 2.

5164—Zenhachi Kobayashi, 1290 Kanuma-machi, Tochigiken, Japan.
5 x 7 and enlargements, bromide, gaslight, carbro of landscapes, genre, figure studies and local scenes; for pictorial landscape with Verito, Struss, Smith lenses. Class 1.

CHANGE OF ADDRESS

5067—F. A. King, 56 N. Alexander St., Charleston, S. C. (Was 85 Church St., Charleston, S. C.) Class 1.

WITHDRAWAL

2858—H. M. Sutton, Dallas, Texas.
Owing to press of business, I am unable to continue further.

Notes and Comment

Reported by Wm. Wolff

Leo Furbeck, manager of the finishing department of the Northwestern Photo Supply Co., has made several changes in his department so as to handle the summer rush.

E. W. Stewart Co. of Tacoma and Seattle have moved their Seattle store from the Columbia street location to 3rd avenue.

J. H. Mendenhall, Kodak and pen doctor of Seattle, is in his new location on the Pike, just a few doors below the old location.

Mr. Turpin has nine departments of Kodaks to handle for the Bartlett Drug Co., Seattle, and does it very nicely.

Shaw Supply Co., Tacoma, are showing some very fine Chinese rugs—a new departure for them.

Jos. Thompson of Chico has sold his studio and is now in real estate business in Modesto. Success, Joe.

Do Not Forget Name and Address

The Barston Company, dealers in exclusive photo-printing materials and Barstone, of Cincinnati, Ohio, in a recent letter to us commenting on the haste of some people, informed us that they had received four cards of inquiry from readers of Camera Craft in which the writers had omitted to give their respective addresses for reply.

We have no doubt that this is an oversight, but we would remind such querists it is an injustice to Barston Company or to any advertiser to be placed in such a predicament, they simply can not furnish the information sought and the inquirer is then liable to arrive at some erronious conclusions.

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The Pittsburgh Salon

The following from Pittsburgh: "Our Jury consisting of Dr. A. D. Chaffee, New York; Francis O. Libby, Portland, Maine, and Holmes I. Mettee, Baltimore, on February 10th and 11th selected from nearly twelve hundred prints, three hundred and twenty prints from one hundred and twenty-nine contributors as being worthy.

California is represented by twenty-eight contributors with eighty-three prints. More foreign pictures have been exhibited and hung, England, Scotland, Australia, etc.

This exhibition as usual will be contained in one of the best galleries in the Carnegie Institute of Pittsburgh.

We hope to present our readers with reproductions of some of the best pictures from this salon with an account of the exhibition, in the May issue of Camera Craft.

International Photographic Arts & Crafts Exposition

The International Photographic Arts & Crafts Exposition to be held at the Grand Central Palace, New York City, April 21st to 28th inclusive, 1923, will have for the Managing Director of the Pictorial Section, Mr. Floyd Vail, F. R. P. S., a well known pictorialist and exhibitor and Chairman of the Printing Committee of the Camera Club of New York.

He is enlisting the support of other prominent men in the field, to aid him in connection with the work incidental to the judging and managing of the Pictorial Section of the Exposition—such as, Nicholas Muray, the eminent Greenwich Village portraitist and illustrator.

Mr. Frank V. Chambers, editor of three photographic magazines and active in photographic affairs for many years.

Dr. T. W. Kilmer, a member of the Camera Club of New York and a successful exponent of pictorial photography in this country and abroad.

Mr. Wm. A. Alcock, also well known pictorialist and contributing member of the Pittsburgh and Los Angeles Salons.

Mr. John E. Garabrant, Vice President of the Professional Photographers' Society of New York and Chairman of the Commercial Section of the Photographers' Association of America has also offered to cooperate in every way possible and his advice, suggestions and cooperation will be of inestimable value.

Other men of great prominence connected with both the professional and amateur end of the industry, whose names will be announced later, will be invited to cooperate for the general good.

The Pictorial Photographers of America

The Pictorial Photographers of America held their regular March meeting at their permanent home at the Art Center, 56 East 56st Street, New York City. The principal speaker of the evening was Mr. Edward Steichen of Photo Secession fame. In his talk Mr. Steichen said he did not think that pictorial photography has progressed much since the Photo Secession days. Although he had been guilty of doing soft focus work, he has concluded that work being done with soft focus lenses is not pictorial or artistic. He conceded that a very few workers are turning out pictorial work with them. He said the work he is doing now he could not get sharp enough. He also said that his eyes had been opened to the pictorial possibilities of sharp lens work while in charge of Aerial photography in the army. His talk was most interesting but left his hearers puzzled, most of whom have been striving for pictorial quality in their work, using entirely different methods than he advised. Whether his audience agreed with him in his talk it will be the means of a good many of them asking themselves if they have the right understanding of pictorial photography.

Preceding Mr. Steichen, Mr. Forman B. Hanna, of Arizona, was introduced by Mr. Clarence White, Chairman of the evening. Mr. Hanna gave an interesting talk on photographic conditions in his state, and his method of working.

The judges for the coming International Salon have been selected and include Mr. Alfred Steiglitz, Mr. Clarence White, Mrs. Gertrude Kassebeir, Dr. Amasa D. Chaffee, and Mr. John Paul Edwards. All indications point to a very large entry list. The monthly print exhibit of which Mrs. Antoinette B. Hervey is chairman, is becoming more and more popular judging from the number of entries and the quality of work submitted.

The monthly loan exhibits are creating a sensation as well they might. Dr. Chaffee, the President of the P. P. A., has a collection of his wonderful Bromoils on the walls this month. Anyone interested in photography should not lose the opportunity to see these remarkable pictures if they are conveniently located to visit the Art Center.

Pathological Pictures To Be Made At Photographic Show

The pathological curator and photographer of a prominent hospital, the Philadelphia General Hospital, plans to show to the public examples of medical and scientific photography at the International Photographic Arts and Crafts Exposition to be held at the Grand Central Palace from April 21st to 28th, it is announced today by Harry A. Cochrane, who states that Howard N. Gosner, the pathological curator and photographer of this hospital plans to display color photomicrography both in lantern slides and prints, and stereophotographo of anatomical and pathological subjects.

According to Mr. Cochrane, this exhibit will show to the public the great importance that this field of pathology has played in modern medicine and science.

Prominent clubs have laid plans to exhibit material at the exposition. The Southern California Camera Club of Los Angeles, the Elysian Camera Club of Hoboken are among those who are expected to exhibit at the show.

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A Photographic Monthly

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CONTENTS FOR MAY 1923

"Between Showers" (Frontispiece) ..... By G. Allen Young

I.—The Oil Print Process ..... By A. Niklitschek 203

Tenth Annual Pittsburgh Salon 210

A Method of Registration for Multiple Printing ..... By William H. Zerbe 214

The Value of an Exposure Meter ..... By Clayton L. Drew 218

Photographing Wild Flowers ..... By Antone S. Soares 221

"Table-Top" Pictures ..... By Edgar Felloes 228

Editorial 233
Control—Our New Associate Editor.

A Photographic Digest 235
Experiments on Control in Carbro Printing—Reproduced Negatives.

Forthcoming Exhibitions 238

For the Professional 239
Monthly Meeting of the P. A. of C.—Vancouver and New Westminster Photographers Installed—The New President, P. P. A. of Great Britain and Ireland.

Executives of the Vancouver and New Westminster Photographers' Association (Illustration) 243

The Amateur and His Troubles 244
Negatives for Bromide Enlargements Abcut Sky-Filters.

Our Book Shelves 245

Club News and Notes 247

International Photographic Association 248

Notes and Comment 249

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A PHOTOGRAPHIC MONTHLY

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CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX MAY 1923 No. 5

I. The Oil-Print Process

Specially Written for Camera Craft

By A. Niklitschek, Vienna Photo Club
Translated by Dr. Ingo Hackh

The Oil-Print Process occupies a most unique position among all other positive printing processes, by it, is possible the production of prints upon an entirely different surface; thereby creating a characteristically beautiful print coupled with the longest possible permanency. In spite of these advantages, this process is comparatively seldom used, the majority of workers being satisfied with the simpler bromoil process. It will doubtless, therefore, be of interest to readers to learn of a simple method of making the transfer, which will here be fully described.

Each good print or transfer requires first a good oil print or bromoil print, and only those who have learned to pigment the simple print should attempt to make the transfer.

Both processes have equal prospects. The bromoil print appears more resistant and furnishes more transfers. In both processes it is of great importance to consider the quality of the paper. Nearly 80% of all failures may be accounted for by the use of unsuitable, old parchment like paper.

The Oil Print Method

Any paper covered with a thick but unhardened layer of gelatine is suitable, as the double transfer paper used in the pigment process, or the commercially obtainable oil print papers. The best appears to be the oil print paper of the Autotype Company of London, also that of H. Kühn's manufactured by Hanfstangel in Munich. The sensitizing is done by immersion in a four per cent potassium bichromate solution* in which the paper is preferably treated in the evening by dim lamp light and left drying

*The necessary concentration can easily be obtained in the following way: A saturated solution of potassium bichromate ($K_2Cr_2O_7$) is at room temperature about 8%, hence, use of this stock solution equal quantities. A saturated solution of ammonium is about 10%, and must therefore be diluted by 1½ quantity of water to make the required 4% solution.

over night, hanging entirely free. On the next day the perfectly dry paper is ready for use.

If time does not allow the slow drying process sensitizing can be done with ammonium bichromate (NH4) 2Cr207, likewise, in 4% solution. Of this 4% solution, 10cc (one-third oz.) are put into a porcelain dish and 10cc (one-third oz.) absolute alcohol added. This alcoholic solution is spread upon the emulsion of the paper with cotton until it is uniformly yellow; the paper is then dried in absolute darkness, without heat, in 10-20 minutes.

The negative should be neither too hard nor too soft. A print is made until the picture appears slightly brown upon the yellow paper. The details in the lighter parts should under no circumstances become visible otherwise, over exposure has taken place and the print becomes too dark. This print is placed in cold water and after one hour the first traces of the relief appear. Warming the water accelerates the relief formation, but the water should not be warmed above 13° C. (=55° F.). It is better, especially when resistant gelatine is desired, to submerge only in cold water, even if it takes hours.

The Bromoil Print Method

The bromoil print is much faster and simpler and has displaced the oil print to a large extent. First consideration is again the selection of the paper and in general smooth and matt-surfaced silverbromide or gaslight paper is suitable, however glossy surfaced and very granular surfaces are not usable. There are in the trade, however, papers with the gelatine too strongly hardened to be used. It is best to use only those brands which have been tried out or selected especially for this process. Good European papers are: Mimosa bromoil print paper, BYH bromoil print paper and the orthobrom papers of Gevaert Co. of Amsterdam. Of American papers we have not had much experience, but undoubtedly there are suitable brands.

The silverbromide copy, which is most probably an enlargement should not be hard, for black shadows will always blot in pigmenting. The picture should be clear **but not hard.** It was the custom to use alkali-free amidol developer and a neutral fixing bath, but long experience has shown that every good developer can be used, likewise, that acid fixing bath will do no harm to the emulsion. In fact, it is safer to avoid the use of amidol as developer. Solid amidol crystals are readily dissipated and carried about by slight air currents, and all photographic activities in a room containing amidol dust suspended is in serious danger, for wherever an amidol particle settles upon a moist emulsion, be it paper, film, or plate, there develops at first slight pinkish, later brown spots, which may even penetrate the entire thickness of the paper. It has taken considerable time to discover this "amidol pest" and connect it with the brown spots.

After fixing and washing, the silverbromide print should be dried and it is advantageous to mark with pencil lines the limit of the picture

›r in the reprint only the surface area of the intended picture may go ›rough the press—all unnecessary parts must be eliminated. As in an ›ked print the markings of the angle is difficult, this should be done now.

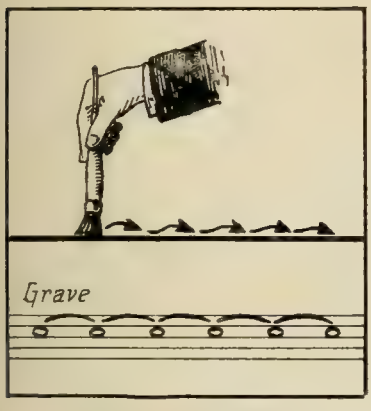

FIG. 1 PIGMENTING

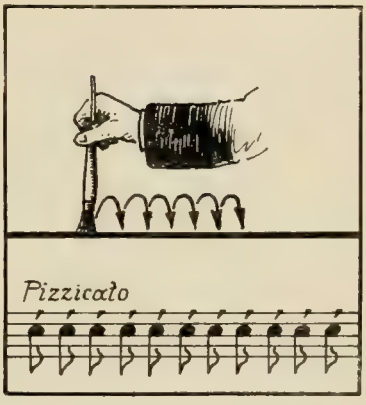

FIG 2—REMOVAL OF PIGMENT

The next step is the bleaching, which is accomplished in the most ›dern way by the following formula of Dr. E. Mayer: Prepare three stock s›utions as follows

A. Copper sulfate CuSO4.5H20....20 gramm (=¾ oz.)
Water.....100 cubic centimeter (=3½ oz.)
B. Potassium bromide.....20 gram (=¾ oz.)
Water.....100 cc (=3½ oz.)
C. Potassium bichromate.....10 gramm (=150 grains)
Water.....100 cc (=3½ oz.)

The bleaching solution consists of

Solution A..... 60 cc (=2 oz.)
Solution B..... 60 cc (=2 oz.)
Solution C..... 20 cc (=2/3 oz.)
Water.....450 cc (=15 oz.)
Hydrocloric acid ..... 15 drops

The copy placed in this green bleaching solution will soon bleach. If th›re remain more or less visible traces of the picture it will do no harm, a›they disappear in the further process. After bleaching, requiring about 1‡ minutes, the print must be washed in running water, and placed in a b›h containing 10-15 drops of sulfuric acid per liter (=one quart) of wter—in this bath the paper remains about one and one-half minutes (until the yellow color has entirely disappeared), afterwards wash again f› 15 minutes and place the print in the fixing bath (fresh neutral solu-ti› 1:10). Print remains there for 10-15 minutes and is finally washed f› 1 hour and then dried. It is essential to have the paper dried, as ›terwise it is difficult to put on the pigment.

The Coloring or Pigmenting

The technique of coloring is the same for both methods, the oil pri as well as the bromoil print. At least three brushes are necessary, tv large ones (about 1 inch diameter) and one small one (about ¼ inch

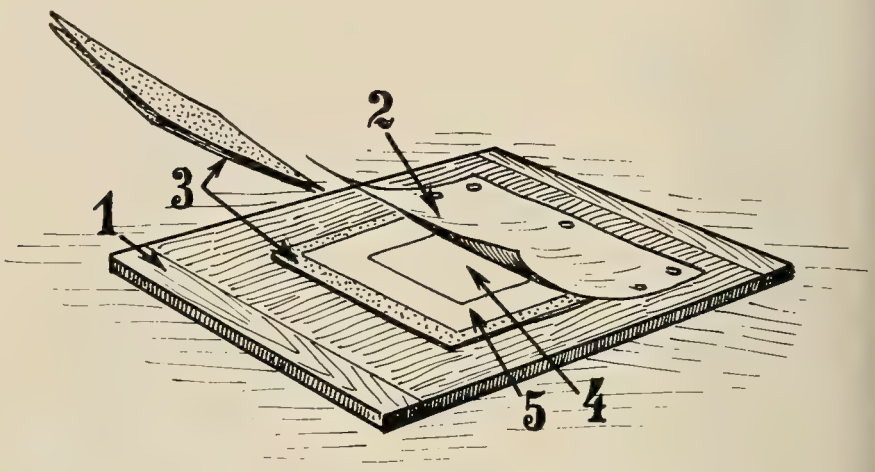

FIG. 3—THE PRESS-PACK FOR THE REPRINT WITH ROLLING-PIN

1. Drawing Board
2. Cover Cardboard
3. Filter Paper
4. Oil-print or Bromoil-print
5. Reprint Paper

One of the large ones is used for the main work of coloring and col lifting, the second large one is kept clean and used for removing color fro the halftones. The small one serves to increase the color in parts by pa tial depositing of soft color.

Of the color two kinds are required: a hard one (little varnish) a a soft one (much varnish). The procedure is now as follows: The print is immersed in cold or very slightly warmed water until a distin relief is discernible: the lights raised, the shadows hollow. The brom print will require warmer water (starting with about 23° C. (=73° F.) a increasing to about 30° C. (=86° F.)) The relief is however not so gre and the best reprints are made from bromoil prints in which the diff ence between high lights and deep shadows appear only as a difference the gloss of the surface, the relief being practically invisible. The so ened print is now placed upon a glass plate, the water removed by fi filter paper (avoid fibres) and the final traces of water removed with clean linen cloth. The hard ink is put upon a glass plate and the lar brush is used for coloring the print. By pressing slowly and firm t color is transmitted to the print. By rapid dipping and lifting the color removed. Musically this is the best illustrated as shown in figure 1 and

The fundamental rule is to start always with the hard ink for on th hard ink the softer one deposits much easier and better reprints a obtained. If the print is properly prepared, the picture will appear readi

the picture does not appear easily, then the print is not suited and any urther manipulation is valueless. It is, however, important to remember iat in both processes, the oil print and bromoil print, the inking becomes asier with each successive reprint.

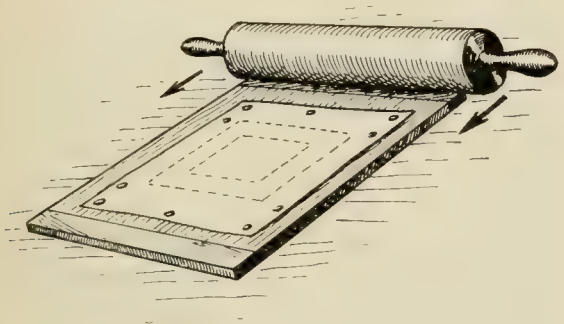

FIG. 4—PRINTING WITH ROLLING-PIN

For the reprint the pictures should be colored as hard as possible, not eglecting the details in the shadows, for the reprint appears always sfter than the original coloring.

he Reprint or Transfer

The principle of the reprint or transfer consists in placing the colored c print or bromoil print face downward upon a slightly sized (therefre porous) paper and to transfer the color by mechanical pressure.

he Paper

The best paper is the genuine copper print paper or card board, ctainable in white or yellow color. Also good results are obtained by Jpan paper, and rough, but not granular, strong drawing paper or paper fr water colors. Excellent prints may be obtained from strong filter pper. Very fibrous or highly sized papers are unsuitable, likewise the gssy card boards.

he Press

The simplest press is the rolling pin: Place two layers of filter paper von a drawing board, then the paper upon which the reprint is to be ade (dry or slightly moist), and upon this the inked and trimmed bromoil print. Add two more layers of filter paper on top, then a thin card board, lrger than the filter paper, and hold in position by tacks. Fig 3. This ethod of packing has the purpose of avoiding displacement and enables auniform and elastic pressure. The rolling pin is moved back and forth vth increasing force. Fig. 4. For prints up to 13 by 18 cm. (5 x 7 inches) tis method is practical, for larger pictures the pressure is too weak and rquires larger rollers and machines.

The laundry press Fig. 5 gives excellent results, provided the surface o the wooden rollers is not too greatly damaged or otherwise distorted.

Likewise the photographic rollers Fig. 6 are practical. It is advan-

tageous to attach a simple shelf to them, as shown in Fig. 7. By fastening this to a table, one has with very simple means obtained an efficient printing equipment.

FIG. 5—LAUNDRY PRESS

A specially designed machine is the Kür-press, manufactured in Vienna. This machine likewise consists in its essential of two rollers, Fig. 8, of which the lower one is connected to the handle. On both sides are screws by which the pressure may be regulated. This small and efficient machine (price about $15) permits prints 11 inches wide and is widely used among European photographers.

FIG. 6—PHOTOGRAPHER'S BURNISHER

Much larger and heavier are the machines designed for commercial work, of which Fig. 9 shows a metal-hand-press. Pressure is obtained by rotating the metal wheel, h, which transmits the pressure equally to the

rollers. The price of this machine, even in the smaller sizes, is rather high, about eighty to ninety dollars.

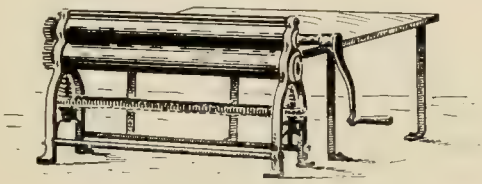

FIG. 7—ROLLERS WITH SHELF

Enthusiastic printers praise also the use of the large presses employed in making copper prints. There the picture is not pressed between rollers, but between two metal plates. Naturally very excellent results are ob-

FIG. 8—HAND-PRESS "KÜR"

tained in this way, for it eliminates all danger of displacement (liable in every roller press)... However these presses are too expensive and heavy, and their installation for photographic purposes alone is out of the question.

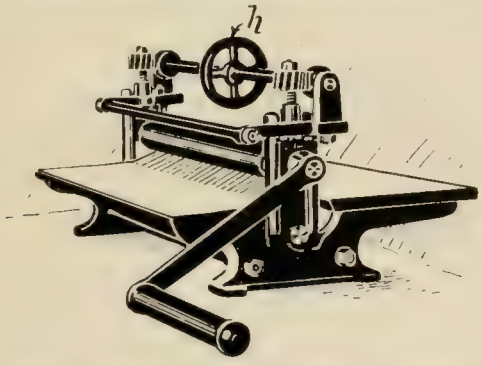

FIG. 9—METAL HAND PRESS. H—Wheel for Adjusting Pressure

(Continued in June Issue)

The Tenth Annual Pittsburgh Salon of Photography

So much has already been said about this annual event that it seems hardly necessary to reiterate the story, but it is important to know if it is accomplishing what was planned—i. e., to stimulate activity in pictorial photography, to bring out new talent and to set a high standard in order to advance. All of this has been accredited and the season just closed has marked another milestone of work well done. Some of the old names are missing and many new workers are taking up the labor where others have left off. It was an inspiration to see the Committee of Selection at their task. Careful, painstaking, and impartial; Pittsburgh is especially fortunate in securing men of such caliber as Dr. Amasa Day Chaffee, Francis O. Libby and Holmes I. Mettee.

Many interesting contributions were received from overseas, and it is hoped that photographers abroad will come to the realization of the appreciation with which their work is accepted, and that in the future they will take even a greater pains to insure each country being well represented in Pittsburgh. It is a pleasure, too, to see that pictorialists all over the United States are taking a greater interest in the Pittsburgh Salon, and are showing their approval of the efforts of the promoters by sending in an increasingly high class of work.

A key letter was used in the catalog following each title, indicating, when the artist gave the required information, the process used. Almost every contributor complied with the request on the entry form, but there were several interesting pictures which were not marked. It is hoped that next year this matter will be given even more attention. The value of the work to other artists is greatly enhanced if the process is known, helping, as it frequently does, to acquaint newcomers, and those who have specialized, with the characteristics of other media.

Almost every class of subject was treated, although there was a dearth of landscapes. Are all but our very biggest men afraid of the landscape? A landscape photographer has more to contend with than any other worker because of the multiplicity and diversity of the objects within his reach. Everyone seems to realize this, but they are letting it go at that.

It is noticeable that every year more and more pictures indicate an increasing appreciation of the everyday things of life, as evidenced by the number of industrial and commercial subjects which are so well handled. Scenes in the markets and back streets of our great cities; work expressing the artistic side of the constructional activities which are going on all around us throughout the year; the pictures made in the steel mills and the railroad yards; all are expressive of the various phases of life which have made America what she is today. But—although we are expressing the individuality of a people, are we not forgetting some of the glories of unadulterated nature?

"A CALIFORNIA COTTAGE"
(Pittsburgh Salon, 1923)
By ANSON HERRICK
San Francisco

With three hundred and twenty prints accepted—the work of one hundred and twenty eight artists—it is absolutely impossible for us to give all credit where credit is due. For this reason, and in spite of the fact that we would very much like to give a detailed description of every print accepted, we are limiting ourselves to comments of five pictures which are here reproduced; These were chosen at random from the walls of the gallery.

Catalog No. 123 — A fine chloride print — Title: "A CALIFORNIA COTTAGE"—by the genial Mr. Anson Herrick, director of that progressive association, the Pictorial Photographic Society of San Francisco—promoter of the Salon at the Golden Gate City—and also one of the very busy men who plays with photography for recreation. This picture is splendid in design, composition and rendering of sunlight values, and in the reproduction has lost none of its beauty. Mr. Herrick has departed from his usual style—and very well so;—the lines are quite Japaneseque.

Dr. Charles H. Jaeger, New York:—Noted for his beautiful little bits, very like etchings, and who is often criticized for making his prints too small for exhibition walls, yet we find them listed in all Salon Catalogues of note. So his work finds favor not only with the jury, but also in the eyes of the visitors and patrons. His print "OF DAYS LONG PAST" which has lost some of its charm in the reproduction is made on thin Jap paper. The figure is well placed and one feels himself transported to the old world to ponder "Of Days, Long Past."

A. S. Weinberg, of Groningen, Holland, is a welcome newcomer at Pittsburgh and holds the attention of the visitor with his homey picture, "OLD MAN," one of those fine genre subjects with a direct appeal. The print is strong, vigorous and well reproduced. The technique is splendid and the motif is true to the Dutch School of Art, as examplified by the world famous paintings of Van Dyck, Franz Hals and others.

And now we go to Cleveland for a theme, a fine industrial poem by Charles Lederle. Busy toilers in construction work, a giant crane, assisted by a shaft of sunlight which concentrates the attention on the pivotal point of the picture. "CONSTRUCTION" is a fine example of the industrial art mentioned in an earlier part of this article. The masses of light and shade make it outstanding in strength. We would like to hold down the high light on the girder in the foreground; this would be a decided help in the concentration of this work.

The illustration of Mr. Holmes I. Meetee's picture "PRINCESS JUE QUON TAI" holds up the reputation of the original print, which is superb in tonal quality, technique, composition and spacing. Some observers were disturbed by the high light in the center of the picture, but to take it away would be unfortunate. Mr. Meetee is one of the real pictorialists of the East, whose work has gained for him the reputation of being versatile, sincere and truthful in his photographic work as a diversion.

"OF DAYS LONG PAST"
(Pittsburgh Salon, 1923)
By DR. CHARLES H. JAEGER
New York

A Method of Registration for Multiple Printing

By William H. Zerbe

From "The American Annual of Photography," 1923

(The following article will prove of practical value to photographers who have occasion to do multiple printing. This system of registration offers many advantages and is much to be preferred to that one which trusts to the two sides and corner of the printing frame. The author recommends the placing of registry marks on the center of each of the four sides; by this means we reduce our possible troubles to a minimum.)

So much has been written by capable writers in the photographic magazines about gum printing that I hesitate to offer anything on the subject. However, taking a chance that my new method for perfect registration for multiple gum printing is new, I will endeavor to explain it, hoping some of the newer gum workers will gain some points by reading it.

Fig. 1 is a piece of plain glass somewhat larger than the size of the negative to be printed from. On this glass two narrow strips of glass are cemented to form the angle of a true square, leaving an opening at the corner which keeps grit and dirt from collecting. These strips can be cut from an old cleaned negative. The cement I use is called Spittler's cement, bought in a Woolworth store. Paper or wood strips could be used, but there is a chance of atmospheric conditions swelling or shrinking them, and this must be avoided if perfect registration is desired.

On the sides, top, and bottom paste a piece of gummed paper where the centre of the negative will come. Now draw a line across in the exact center from side to side and top to bottom. These marks are shown in Fig. 1. Fig. 2 shows a negative in place in the printing frame, which, of course, is larger than the negative used to print from. Care must be taken to hold the negative snug against the glass sides. For this purpose I use a small spring shown in the upper right corner in Fig. 2.

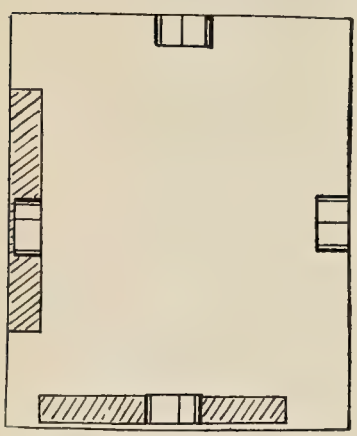

FIG. 1

The paper to be coated should be of a good quality and one that does not stretch much. Either before or after it is coated the back of it is marked off with a T-square, making a line about three-quarters of an inch at the edges in the center of sides, top, and bottom. For this purpose I use a drawing-board which has a line drawn across the centre from top to bottom and side to side. The paper should be about an inch larger than the negative, which allows a half-inch margin to facilitate future coatings. It is tacked to the centre of the board face down, and the registration marks are made with the T-square. In this way the marks are perfectly square, even though the paper

"OLD MAN"
(Pittsburgh Salon, 1923)
By A. S. WEINBERG
Groningen, Holland

may not be. Besides the registration marks, it is advisable to make some distinguishing mark, so that the image from the first printing will match the negative at future printings. Occasionally the subsequent coating may cover the first so that the image cannot be seen. I make an arrow in the top right corner.

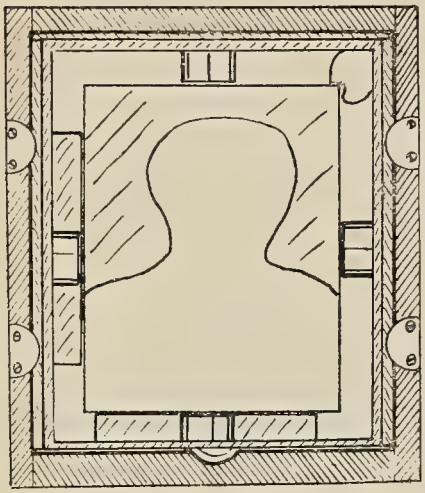

FIG. 2

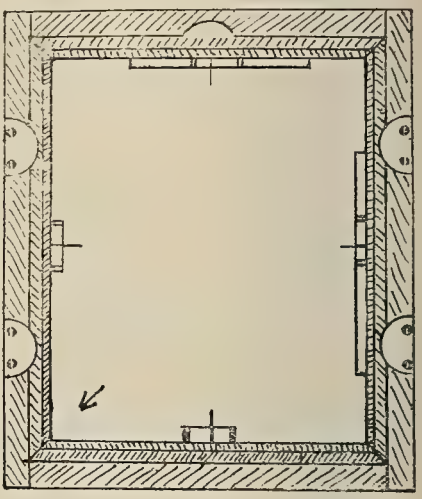

FIG. 3

Fig. 3 shows the printing frame with the negative in place, a piece of coated paper face down, and the registration marks made to match the marks on the glass with the guide strips and gummed paper registration marks. The piece of paper shown is the exact size of the printing frame, and sections have been cut out at the registration points. The arrow shown in the drawing is thus supposed to be on the back of the paper. These must all be kept in place until the back of the printing frame is placed in position, when it is ready for printing.

After the print is developed, dried, and re-coated, all that is necessary for registering is to lay the paper so that the arrow is in the top right corner, and the registration marks again match each other. This can be done repeatedly for as many printings as one wishes to make.

If there should be any stretching of the paper, it will be from the center, and will be distributed four different ways, and not noticeable. In the usual method of registering the negative and paper from the corner of the printing frame, the stretch will be from one point in the corner to the opposite corner, and if large sizes are used there will be quite a noticeable overlapping of the image in the other printings.

It is not my intention to go into details of mixing the pigments and coating the paper, for that has been fully covered by able writers in the earlier numbers of the Annual. I do, however, think some advice on multiple printing might be in place for those who wish to try it for the first time.

"CONSTRUCTION"
((Pittsburgh Salon, 1923)
By CHAS. LEDERLE
Cleveland

Be sure to select a good quality of paper, fairly heavy and one that does not stretch. A good test is to cut a strip of the paper that it is desired to use, say about twelve inches long and two inches wide; cut it so that the ends are square. Cut this in half so that you have two strips one inch wide. Now soak one of these strips in water for about an hour, and then dry. Then compare the length of the two. The one that was soaked will be longer if it is a poor quality of paper.

For multiple printing use a minimum amount of pigment and coat very thin. My own method is to print very strong with a thin coating of pigment, so as to get a good impression of the high lights, printing several times if necessary, and when these and the half-tones are satisfactory I give a heavier coating, that is, more pigment, giving a shorter exposure so that there will remain nothing but shadows from this printing, the high lights having washed away.

Do not use too dense a negative, nor one that is too flat, although with the multiple printing it is possible to get excellent results with this kind of negative, but it takes quite some experience to mix the proportions of pigment gum and bichromate. To get good results, therefore, I suggest the easiest way for the beginner.

The Value of an Exposure Meter

By Clayton L. Drew

Experience usually gives the professional photographer the viewpoint that he has taken so many pictures, has had so much practice and knows his own business so well that he has developed a sort of second sight in accurately guessing the correct exposure to give to his negative under each condition.

In a good many instances he fails; but not as often, of course, as the amateur who tries to guess. There are so many conditions to be taken into consideration that it is a wonder there are not more spoiled negatives caused by improper exposure. The nature of the object to be photographed, the light conditions and distance all are vital points to consider **scientifically** before determining the exposure.

Mechanical methods for measuring the time of exposure are coming to be used more and more by all classes of photographers and many different types of meters have been placed on the market. Their purpose is to measure the light which is directly reflected from the object rather than general light conditions. A great many amateurs labor under the mistaken assumption that the consideration of light deals only with the light of the sun, the sky's brightness or otherwise and the degree of clarity of the atmosphere. In other words, they consider the **source** of light. This is decidedly misleading, for the only light which should ever

"PRINCESS JUE QUON TAI"
(Pittsburgh Salon, 1923)
By HOLMES I. METTEE
Baltimore

be measured is that light which is reflected from the object being photographed. This, as every sophisticated photographer knows, is the light which affects the sensitized film or camera plate.

Mr. C. L. Drew writes the following description of the manner in which a professional photographer was converted to the use of an exposure meter:

"The writer, using a meter, known as the "Direct Exposure Meter," made several tests this last summer while in the high Sierras, and out of one hundred and forty-one pictures taken, one hundred and forty were perfect exposures, the other was a double exposure.

"A friend of the writer, while visiting the Yosemite Valley, chanced to stop to take a picture of El Capitan and while doing so a professional photographer employed in the Valley came along. As the cloud effect was particularly attractive at the time the professional made the remark that he thought he would also "take a shot." While the professional was setting up his camera, my friend used a meter and ascertained the correct exposure under that particular light condition. Then he asked the professional what exposure he was going to give and was surprised to find that the professional's time was much less than his time. My friend then gave the professional the time that his meter read with the result that they both agreed to take a picture, the professional taking his picture by guess and my friend going according to the meter. They both returned to the dark room and developed the two pictures, with the result that the professional's picture was much under-timed, while my friend's picture proved to be a perfect exposure. Since that time this professional has used a meter and has secured perfect exposures under the most trying circumstances, with the result that he has sent many of his amateur and professional friends after these meters.

"If the amateur will use a meter whether it be this kind or one of the many others he will find a great improvement in his pictures, and I can honestly say that he will save time, money and many disappointments, as what is more disappointing to take a picture which cannot again be taken, owing to changes in circumstances or surroundings and to find that the same was under or over exposed?

"In conclusion, let me say that the wise man is the man that can be shown. The professionals are learning this and you will find many using a meter; and this particularly applies to the movie photographer, as he must secure a good negative."

Four things come not back—the Spoken Word, the Sped Arrow, the Past Life, the Neglected Opportunity. So wrote Omar in Persia long ago. A satisfied customer invariably comes back—but not alone. He brings a friend with him.—"Cad."

CALIFORNIA WILD ROSE
(Rosa Californica)

Photographing Wild Flowers

By Antone S. Soares
Hayward, California.

The photographing of wild flowers offers a fascinating hobby, provided those who take up the work are in sympathy with the subject. In this line of endeavor, as well as in any other, one must possess an inherent love for one's work, if any appreciable measure of success is to be expected. Without this attribute one may as well employ one's self otherwise. It was an inherent love of nature, and of the wild flowers in particular, that first prompted me to take up this interesting pursuit and not the thought of any monetary remuneration that might accrue from it. Some may say that the locality in which they live does not offer an opportunity for this sort of work, on account of a supposed lack of material, but this is hardly true, for every locality has its peculiar flora. It is very often the lack of interest in the subject that blinds us to the material surrounding us. As a rule it is the most brilliantly colored flowers that first attract our attention, but it is not often these that make the most attractive pictures. The lowly dandelion is considered a weed by most people, yet in its fluffy seed heads are inherent wonderful pictorial possibilities. The problem in photographing these "blow-balls" as the children are wont to

WILD HELIOTROPE
(Heliotropium curassavicum)

CALYPSO
(Calypso borealis)

call them, lies in being able to gather them, and take them home without losing any of the seeds, for the slightest puff of wind will blow them away. Here let me confide to you a little secret: gather the seed heads before they open out, and set them in water to await further development.

It is not necessary for any one to go into any great expense to avail himself of the opportunity to follow so interesting a hobby, for any outfit capable of taking pictures post card size or over, and which is fitted with a long bellows, and a lens that is not of too short a focus, will do very nicely. I have adopted the five by seven size as most suitable for my work. The lens for this work need not be a high priced one, though the best one that can be obtained, consistent with the condition of one's purse, should be used. The reason that a short focus lens is not desired, or suitable for this class of work is, that it is apt to distort the image when employed at close range; and to do justice to any flower, it must be photographed from close quarters, so that the plate will be properly filled. To obtain the right color values, it is absolutely essential that one should use a backed orthochromatic plate, in conjunction with a suitable ray filter. This will do for all flowers that are not red in color, and these can be more profitably photographed on a panchromatic plate, though extra care should be taken in filling the plate holders, and in the manipulation of the plate during development, otherwise a fogged neg-

BLAZING STAR
(Mentzelia laevicaulis)

GENTIAN
(Gentiana Calycosa

ative may be the result. A green light, such as Wratten's, is usually employed for this purpose.

As I have already said, to succeed in this, as well as in any other endeavor, one must be in tune with one's work,—that is one must have an inherent love for the work, and in addition to this, one must possess an extraordinary amount of patience, which I assure you will be needed during the different stages of the work. As a rule, wild flowers do not grow in one's back yard, consequently one has to hunt them up in their native habitat, and this often requires a long hike to procure one or two specimens. Having procured these, the problem is one of getting them home in condition to be photographed. I have found that a large card-board box, lined with wet paper, is very suitable for the purpose. The specimens should be further wrapped in wet newspapers or cloth. In this manner flowers may often be carried quite a distance without wilting too much. One may, if desired, photograph the flowers as they grow in their native home, but the difficulties to be overcome are many, and a pleasing picture is seldom secured. To obtain a good portrait of any flower, it should be photographed where the light can be controlled, and where the wind will not interfere with the exposure, which must of necessity, be long. I have found out from experience that the greatest mistake one can make, is to try to photograph any flower immediately after it has been culled, for

OSCOBITA
(Orthocarpus densiflora)

LEOPARD LILY
(Lilium pardalinum)

during this stage wilting will occur to some extent, and to picture it before it has fully recovered is to invite disaster, for shifting is likely to occur during the exposure. The best time to gather specimens to photograph is in the evening, or afternoon, preceding the day in which they are to be used. When procured, they should be placed in water over night, and in the morning they will be in good condition to work with. With some flowers it may be necessary to plunge a portion of the stems in boiling water to enable them to recover sufficiently to enable one to picture them successfully. They should be arranged in a suitabble receptacle, and a wide-mouthed bottle offers the best thing for that purpose. A cork in which a few notches have been cut, and thru which the stems are thrust, helps to hold the flowers rigidly in place during the exposure. While on this subject of exposure, let me say that it should never be arrived at in a hazardable fashion, but should be determined by the employment of a reliable exposure meter, or by any other method with which the operator is familiar. I have adopted the Steadman System as very suitable for my needs on account of its reliability and simplicity. As plenty of detail is essential in such work, the exposure should be ample, and if one must err, let it be on the side of over exposure. In the case of red flowers, the exposure may be increased to two or three times that which would be normally required. I can still remember the difficulty I had in obtaining a good picture

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INDIAN PAINT BRUSH
(Castilleia parviflora)

SHOOTING STAR
(Dodecatheon hendersonii)

of the snow plant. All parts of this plant are of a rich, glowing scarlet color, and an exposure of five minutes thru a three-times ray filter, and the smallest aperture did not give me the result that I desired, so the exposure was increased to fifteen minutes, when a very good negative with plenty of detail was secured.

Most of my work has been done on a back porch where it is protected from the wind. The flowers are arranged in front of an open door, and the darkened room used as a background. In this way a pure black background is secured, which I prefer to a white one, because it gives greater relief to the flowers. One may employ different shades of card-board to good advantage, or one may have some grounds painted to order, but that is hardly necessary, as one may use any material available, provided it is placed far enough back of the subject to be out of focus. Very often it is impossible to do the work inside, especially if one happens to be away from home on a camping trip, and wishes to add a few more negatives to one's collection. Such a condition presented itself while on a camping trip to the Yosemite Valley. After studying conditions, I came to the conclusion that if I wished to make any exposures it would have to be done in the morning prior to nine o'clock, as after that a breeze usually sprang up making it impossible to work with any show of success. For a background a brown blanket slung across a cord that was stretched between

MADRONE
(Arbutus menziesii)

YELLOW TREE LUPINE
(Lupinus arboreus)

two pine trees, was used. Out of seventy plates that were exposed on this occasion, only one showed any movement of the blossom during exposure.

Another attribute that is very essential for the successful pursuit of this hobby, is a faculty for a proper arrangement of the subject, so as to give a pleasing picture. It is a great help to have a knowledge of the rules of composition, but is not absolutely essential. A great deal may be learned from studying the works of others, and also from reading books on flower arrangement. The Japanese, who are great adapts at this sort of work, often spend, what we would consider an inordinate amount of time, in arranging even a single blossom and a single leaf in a vase, just to obtain a few pleasing lines. It pays to take all the time necessary, not only in the satisfaction to be derived from the possession of a picture that is a delight to the eye, but also in the amount of material saved, which is quite an item nowadays. As a rule there should be no straight lines in the composition, but rather a series of curves, and none of them should intersect each other. The greatest mistake with the beginner is, that he wishes to include too many flowers in one picture, with the consequence that his pictures have a crowded effect. The subject should properly fill the plate, but massed effects should be avoided. Very often the novice makes no attempt at arranging his subject, but throws the flowers into a vase in any fashion, and expects the result to be an artistic picture. Sometimes

one blossom with a few leaves suitably arranged, is sufficient, especially if it happens to be a large one. In no case should a composition be attempted with more than seven blossoms, for the difficulties to be overcome are correspondingly greater. The employment of odd numbers is preferred to even ones.

As the identification of certain species of wild flowers is often difficult, one contemplating taking up this work should know at least enough about plant life to be able to tell one species from another. To know the flowers one has photographed, by their scientific names, makes the work more interesting, and obviates the unnecessary duplication of pictures of the same species. The pictures will also have a greater scientific value if accurately labeled.

On the subject of development I have little to say, save that one should do it himself, using the formula that comes with the plates, because the manufacturers of a certain brand of plates ought to know just in what proportion a developer should be mixed to produce the best results with their product. As plenty of detail is essential, the developer should be diluted considerably.

Very soon after taking up this work, I came to the conclusion that an uncolored picture of a wild flower was not so attractive, nor did it possess as great a scientific value, as one that is colored, so I decided to color each print as true to nature as possible. For this work I use transparent water colors, of which there are a good many brands on the market, but a brand that is permanent should be chosen. As it is an impossibility to retain in one's memory the exact color of any flower, one should make a print as soon as possible, and color it while a suitable specimen is at hand for the purpose. This colored print will serve as a guide in coloring future prints of the same flower, and one such print should always be kept for reference.

When one's collection of negatives number over five hundred, as mine does, one has to invent some sort of filing system to help in locating a negative when it is needed. Each negative, after being enclosed in an envelope, should be given a number, and then stored away in boxes in consecutive order, or on shelves. The name of the flower, and the number should be plainly written on the face of the envelope in which the negative is enclosed. A typewritten list with the scientific names of the flowers, and corresponding numbers arranged alphabetically, should be provided for reference when looking up any negative required.

I am sure any one taking up this work will find it extremely interesting and instructive, provided there is an inherent love for flowers.

Two Tommies went into a restaurant on the Eastern front and said to the waiter: "We want Turkey with Greece." "Sorry," the waiter replied, "but we cannot Servia." The Boss came in and heard their order. Then he said: "I don't want to Russia, but you can't Roumania." So the two Tommies went away Hungary.—Inn Sides.

"Table Top" Pictures

By Edgar Felloes

There is a class of photography which is well worth cultivating and we hope by drawing the amatuers' attention to it we may induce some to give it a trial. Table top pictures are usually made by building pictures on top of a table or other suitable support. Buildings are generally constructed of cardboard; these may be colored and everything done to secure an effect similar to nature. Toys are used to give life to the streets and sometimes little figures are made in plasticine which may be placed in the middle distance, this enhances the realistic effect. Frequently an enlarged photograph is used as a background and the whole scene is photographed together. Some of the pictures secured in this way are really remarkable and excite considerable astonishment among those who are not familiar with the methods adopted. There is no end to the amount of ingenuity that may be exercised by the skilled worker and it is not to be wondered that the occupation becomes a fascinating one.

It was many months ago that Camera Craft received from a friend, Dr. Miles J. Breuer, a christmas card that may be classed under this heading, and the Doctor very kindly gave his method of working; this we now publish. At the time we entertained a hope of being able to secure specimens of this class of photography from other readers, but we were disappointed and were forced to conclude that only a few indulged in this sort of amusement.

Quite recently, however, another reader favored us with his attempt accompanied with notes, and through an English contemporary we secured a third example, which we also here publish. It will surprise many readers to learn that this picture "The Spotlight" won a prize of five hundred dollars, it was exhibited at the London Salon of Photography. This pretty conceit only serves to show the possibilities of table-top pictures and the endless variety of subjects that may be treated in this manner.

The following is what Dr. Breuer has to say:

CHRISTMAS GREETINGS

By Miles J. Breuer, M. A., M. D.

Lincoln, Nebraska.

Every Christmas I get about two pecks of conventional Christmas greeting cards. Many of them are very beautiful, and many of them come from friends for whom I have much respect and affection. Nevertheless, somehow or other, all the little cards in red and green and gold, with dabs of snow and holly and a little conventional verse, all go on the same stack, and not one of them gets a second thought. Perhaps in the middle of holiday week, I run through them to see if I haven't omitted someone in sending my greetings.

THE HOUSES WERE OF CARDBOARD

And that is the way others treat my greetings; I haven't the least doubt about that, if I purchase them at the counter, or give the salesman who visits my office, an order for a gross of them. Therefore, for several years past, I have sent Christmas greeting which have been efforts to instil a little of the personal element into our otherwise mechanical and wholesale method of greeting our friends on Christmas.

A card or greeting, designed by the sender, and made by him, may lack by absolute standards, the art and the intrinsic excellence of the admirable cards gotten out by skilled hands and highly developed machines. But I think that makes the difference to the recipient. The personal note, the flavor of individuality and originality outweighs other considerations. Since I have been making and sending photographic cards, many persons have taken the trouble to speak to me or write to me, and mention their interest in the cards I sent them. I consider that sufficient proof that my greetings hit the spot a little more directly than the conventional ones.

My greeting card this year, I feel, is the best one I have ever made. That is not saying that there is not room for considerable progress; and I expect to make better ones in the future. I studied a long time, trying to get an idea; and I got my idea very suddenly one evening in the 10-cent store, where several paper models of little old-fashioned houses were displayed for sale. I grouped them around a little and my Christmas card

NOW AND FOREVER!
A pair of dolls are our heroes, an enlarged photograph our background

idea was complete. I bought three of the houses, a Santa Claus, and a reindeer.

The houses were arranged on a board, with a sheet of white wrapping paper hung against the wall for a background. The trees are twigs from some cedars growing in my yard. The automobile was cut out of a magazine, pasted on pasteboard, and propped up. I first sprinkled sand over my board, and then sifted flour from a sifter all over everything. The paths were cut out of paper, and acted as masks during the snowstorm; when it was over, I lifted them away and exposed the bare sand beneath.

This scene I photographed on a Seeds 60 plate, with 15 inches of magnesium ribbon and a reflector on the opposite side; developed in a tank, and enlarged to 11 x 14. Then the lettering was put on with india-ink and Chinese white. The automobile looked a little pale, and was touched up with india-ink. The cedar twigs did not look solid enough for real

trees, and were touched up a little. Other little details were fixed up with black and white inks. The enlargement thus prepared was photographed. I tried both a 23 and a process place (Seeds), and I prefer the result on the 23, though I think popular taste would run to the brighter contrasts of the process plate.

This is what Mr. Murray writes concerning his picture:

"Now and Forever!"

By Percey F. Murray
Buffalo, New York.

Upon arriving home from business one evening, I was amused when entering the room to see upon the mantlepiece over the fireplace, the two dolls, the decorative effort of my young daughter. It occured to me then, it would be a good "stunt" to photograph them, as they looked "cute" with the flag waving in the breeze from the rising heat waves of the fire.

The next morning, being Sunday, I arranged this group upon a table and with an 8 x 10 landscape print for a background, and some sand for a foreground, to break the harsh line where the picture and table top met. I must not forget to mention the dolls are only two inches high.

I used this design for a New Year's card, the original is on a 5 x 7 film cut down to post card size with "A Happy New Year 1923" lettered on a separate piece of celluloid with opaque, and printed together with the film. The result was a neatly white and lettered greeting, an attractive card, appropriate for the occasion. There are many subjects of a similar nature one can photograph at home on a wet day.

We are indebted to the Club Photographer for particulars of our third picture.

"The Spot Light"

By W. Findlay.

On a Saturday afternoon, I was in Gordon Street, Glasgow, and I saw the little figure in a shop window. It struck me it would look fine worked somehow into photography, and one thought led to another, when I mentioned the matter to my brother, and to my surprise he bought it for me. It is a neat wax model 10 inches high, standing on a round piece of wood. For many days I thought of it until the "stage" idea came to me. I cut from the black paper or envelope in which all bromide papers are enclosed, small footlights. The "boards" or "stage" is a piece of cream mounting board—halved—the shape of the feet of the model cut out, so that each half fits into the feet, on top of the round wooden stand on which the figure is stuck, so giving her the appearance of being on a stage. On the floor I had an electric stand lamp, slightly below and in front of the stage, containing a globe (60 candle power Osram) behind the globe being a reflector on which I placed or rather balanced the footlights, so throwing some reflection of the footlights on the cream card or stage. On the piano stool I placed my enlarging lantern, directly in front of the figure and

"THE SPOTLIGHT"
Awarded the £100 Prize in the £3000 All-British Competition. Reproduced from "The Club Photographer".

slightly behind and above the stand lamp on the floor, which when lit threw a round disc of light on another piece of cream card behind the figure and at the same time a shadow of the figure on the cream card and so—"The Spotlight."

It was taken in the drawing room. The enlarging lantern electric wire I fitted to an electric plug, and the floor light or stage light coming from the stand lamp reflecting the footlights on the stage is fitted to the ordinary overhead ceiling lights for the room by another wire. The camera is on a tripod a little to the right and slightly behind and above the enlarging lantern. It is all done on a small square card table, almost complete darkness, apart from the above two lights on. The exposure was 40 seconds and the plate developed with Rytol, 1 to 12 ozs. water, factor 6. I may say it is one of many negatives.

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Control

The average person looking upon a really artistic photograph of a view is more apt to remark, how lucky the photographer was to be on the spot at the right moment, than to give the maker of that picture the credit due him. In his heart, the average photographer feels he could do equally well under like conditions. The excellence of the work artistically often convinces him of its photographic truth, forgetting altogether the difference between mental impression and optical rendering by the lens.

It is by control the more pleasing pictures are made. In studio work, the effects we desire are more easily arrived at than out of doors. In the latter case we have frequently to work on our negative or print, or both, with the object of emphasizing the story, it being very difficult and often impossible to do this with uncontrolled light. For this reason alone, we must admit the desirability of control. It lifts our work out of the class of the naked photograph. Control methods are matters of individual preference. The worker naturally using such means as appeal to his judgment. Let us take a concrete case, the reader will better understand the point.

We will suppose a lady in white is posed befor a leafy background, the light is bright, and the light glints on the green leaves with the result that these leaves will most likely show as white in the print. Of course the lady's dress will show white also. As the leaves show white we have lost their local color value, this is hardly a bid for truth. Unless this area of untruthfulness is very restricted, it can not be tolerated from the standpoint of art, and for his reason: The mental impression of the natural scene is, a figure in white on a dark background; the photograph failed to give us this because the conditions were not right, the plate registered what the eye was not conscious of. Presuming the picture was good in other respects, it stands to reason we must have recourse to control. The following is one of many ways and at one time was frequently practiced by combination printers.

Make a contact print on printing out paper, Solio for instance. When the figure in white is sufficiently printed, remove the paper from the frame and by artificial light, paint out the figure with opaque, using a suitable brush and applying the pigment stiffly. It may be necessary to use a magnifying glass for aid, it is absolutely necessary that the opaque be applied up to but not over the outline. When this is done place the dry print in a printing frame fitted with a clear piece of glass. Put the

picture sensitive surface down next the glass, close the printing frame and expose the print to subdued daylight. By this means we lower the tone of our background, and a grey tint will be substituted for the spotty white leaves. Thus will our background recede which all backgrounds should, and this gives a chance for the figure to stand in relief—detached, that was our mental impression.

Having followed our advice so far, finish the Solio print according to the directions enclosed in the packet of paper with this additional precaution; while the print is in the first wash-water, remove all the opaque with a wad of cotton, this is quite easy, provided the opaque was not "teased" into the gelatine surface of the print during its application; hence we advised using the opaque thickly, that is, with little water.

If several prints of the subject are desired, the proper method of procedure is to make a copy of the correctly finished print and use the new negative for duplication.—E. F.

Our New Associate Editor

Mr. P. Douglas Anderson, well-known photo pictorialist and member of the Pictorial Photographic Society of San Francisco, has now joined the editorial staff of this magazine.

Many readers are familiar with this photographer's work, through reproductions published in Camera Craft. His pictures have been accepted in the leading Salons of America and Great Britain also, and though their maker has achieved honors he is no less painstaking today than when he exhibited his first picture with the usual amount of trepidation.

Our new associate is an amateur photographer in the best sense of the word. He indulges in photography because he loves it, financial gain for this work does not enter his mind. He has ideals and he tries to attain them. He believes we should strive to get it all in the negative and it is not at all unusual for Anderson to visit the same spot many times and at different hours, with the hope that on each occasion the light will be "just right." Such perseverance richly deserves a reward and there are times when our friend reaps that reward and returns triumphant from his trip with the enviable enthusiasm of a boy.

Mr. Anderson has had much experience in photography, and during the last few years has been closely connected with the photographic trade, in consequence of this, he has a considerable following among the new recruits in photography, in fact P. Douglas Anderson is looked upon by many as the hope of the "Amateur in distress." They come to him because he knows. There are a thousand and one things the beginner wishes to know and Camera Craft felt that here was a man especially fitted to have charge of that department, "The Amateur and His Troubles" and from this issue the novice will be well looked after in those columns.

It has been decided to have Mr. Anderson represent Camera Craft at the next International Convention of the Photographers' Association of America, which assembles in Washington, D. C., July next.—E. F.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Experiments on Control in Carbro Printing

The writer is of opinion that there is no method of printing which gives such fine results to the worker who confines himself to a hand camera, and consequently uses small plates, as the Carbro process, unless, of course, he is prepared for the trouble of enlarged negatives and contact prints. In the course of making a considerable number of prints by this process certain results were obtained which did not quite fit in with what was expected; the number of variables which occur between the commencement of operations and the finished print makes it difficult to determine what is exactly the cause of any particular variation. It was therefore decided to carry out a series of systematic experiments, altering one variable at a time, and to tabulate the results.

To eliminate one variable at the start, the question of the No. 2 solution is worth consideration. Early experiments with formaline purchased fortuitously gave good results, but the time of immersion in the solution with different samples was variable and longer than with the materials supplied by the Autotype Co. The druggist supplies formaline presumed to be B. P. strength, i. e., 36—38 per cent., but it appears to be rather a variable quantity. The solution shown in Table 2 was known to be out of a new stock, and the results are similar to those with Autotype solution. To eliminate this variable, however, it appears advisable to buy the solution from one source.

The method adopted was to take a certain number of prints, cut them in pieces, and take Carbros off each piece. When dry the margins were cut off and the parts pieced together, as it is considered that this method enables slight variations in density and contrast to be readily detected. As a species of cross check some of the later experiments were conducted with pieces of the earlier bromides; when finished, as will be seen from the notes at the bottom of the tables, these pieces fitted in with the earlier prints extremely well.

The writer is not possessed of a laboratory, but the conditions were certainly kept as constant as will usually be found in everyday working; the temperature of the room was carefully measured each time, and did not vary more than 5 degrees, the range being 60 degrees F. to 65 degrees F., and the temperature of the solutions varied to a somewhat less extent, certainly not more. As the temperature of the developing water has a considerable effect on the depth of the print, great care was taken to have a good volume and start operations on each print at exactly 94 deg. F. As soon as the backing was stripped, steps were taken, by agitating the print and by pouring water on to it, to remove all the freely soluble gelatine and pigment as quickly as possible. As soon as the print was clear it was rinsed in cold water and placed in the alum bath. No attempt, of course, was made by prolonged immersion, or by the use of hotter water, to lighten a test piece which would normally be considered too dark, nor were contiguous pieces of one bromide compared until they were ready for drying.

It did not appear useful to vary the time of immersion of the tissue in No. 1 bath, as it should be saturated with solution.

The places where variations might occur were:—

(1) Time of immersion in No. 2 bath.
(2) Strength of No. 2 bath.
(3) Time of contact with bromide print.
(4) Time of contact with transfer paper before development.

The tables below give the results, while the notes on the tables refer to the cross checks previously mentioned.

VARYING TIME OF IMMERSION IN NO. 2 BATH
Constants: (1) Time of contact with bromide, 15 minutes.
Constants: (2) Time of contact with transfer paper, 30 minutes.

No. of print.	Make of paper.	Type of print.	Time of immersion (secs.).	Appearance of bromide print after contact.	Result.
1	Illingworth	Normal, no heavy shadow	0 5	Completely bleached	All half-tones washed up. A good deal of washing up.
2	"	"			
3	"	"	10	"	Correct.
4	"	"	15		
5	"	"	20	"	"
6	"	"	25	"	"
7	Wellington	Strong, rather heavy print.	10	"	"
8	"	"	20	"	"
9	"	"	30	Darker portions unbleached	"
10	Vitegas, bleached and re-developed.	Strong, heavy print.	15	As No. 7. A considerable portion of print unbleached. Completely bleached.	Distinctly flatter, less depth in the shallows. Correct.
11	"	"	30	"	"

VARYING STRENGTH OF NO. 2 BATH.
Constants: Time of contact with bromide, 15 minutes.
Constants: Time of contact with transfer paper, 30 minutes.

No. of print.	Make of paper.	Type of print.	Strength of solution.	Time of immersion (secs.).	Remarks.
12	Illingworth.	Normal.	A, normal strength.	15	All four pieces joined u
13	"	"	B, normal strength.	15	without much differenc in density and contras
14	"	"	B, half strength.	30	The quality of 12 and 1 was apparently slightl
15	"	"	B, quarter strength.	60	better than 14 and 1

NOTE—A solution is Autotype Co.'s make.
B solution contains formaline B. P. strength, purchased from a druggist.

VARYING TIME OF CONTACT OF TISSUE AND BROMIDE.
Constant: Time of contact with transfer paper, 30 minutes.

No. of print.	Make of paper.	Type of print.	Time of immersion. (secs.).	Time of contact. (mins.).	Remarks.
16	Illingworth.	Normal.	15	22½	No effect.
17	Wellington.	Strong print.	30	22½	Full depth.
18	"	"	30	10	"
19	"	"	30	5	"

NOTE—No. 16 is part of print represented by 20, 21, 22; the four pieces join up together well.
No. 19 is a duplicate of 25; and both are of the same depth; the same applies to 18 and 24
Nos. 18 and 19 show a trifle more contrast than 24 and 25; there was not much differenc in the amount of bleaching between 17, 18, and 19, 17 was rather more bleached; bu the results were clearly not proportional to the time.

VARYING TIME OF CONTACT OF TISSUE AND TRANSFER PAPER.
Constants: Time of contact with bromide, 15 minutes.
Temperature of development, 94° F.

No. of print.	Make of paper.	Type of print.	Time of immersion in No. 2 (secs.).	Time of contact. (mins.).	Remarks.
20	Illingworth.	Normal.	15	30	Normal.
21	"	"	15	50	"
22	"	"	15	60	"
23	"	"	15	12	"
24	Wellington.	Strong print.	30	12	"
25	"	"	30	60	"

No. 23 is a duplicate off the same piece of bromide as No. 4, and joins up well with 3, 5, 6.

The general trend of the results was a little unexpected. It was known that Illingworth's paper in normal working required less time in No. 2 bath than Wellington's, and the appearance of the bromide print when stripped from the pigmented paper is interesting.

In every case with Illingworth's paper (the prints were not very dark) the print was completely bleached, and the results tend to show that, given complete bleaching, none of the variations attempted has any effect on the ultimate result. Alternatively, there is not much object in continuing contact between the bromide and the tissue when bleaching has become complete.

With Wellington paper the prints used were rather dark. Some black was always apparent on stripping, and where the times of immersion in the No. 2 bath were long the amount of bleaching was less than where it was short.

This only confirms the published directions that short immersion gives depths and long immersion gives flatness, but with this limitation that it is not possible to increase depth over that which would be obtained as a straight transcript from the bromide, though some control in lessening the depth is possible.

It was not anticipated that so short a period as five minutes in contact with the bromide would give full depth, though the print was a dark one to start with. Further experiments with Illingworth paper gave results which were a trifle too light. It appears better, as stated below, to adhere to the standard fifteen minutes.

Another practical point which was clearly shown in these trials is that a print on black tissue looks slightly darker than one of brown color, and this might be useful if a print was required from a rather light bromide.

The increased length of time between putting the tissue on the transfer paper and development did not, as is generally supposed, require hotter water. The time which elapsed before it was safe to strip the backing was certainly longer, but this may well be due to the tissue having dried somewhat more; there was no difficulty in developing a print, which had received sixty minutes' contact, with water at 94 degrees F.

In the writer's opinion, therefore, the amount of control possible by a long contact with the transfer paper is very small, the extra depth, if any, which could be obtained by this means is nothing more than could easily be washed off by hotter water without fear of blisters. Possibly a longer contact than one hour might have had some further effect.

It is therefore considered that the best method of procedure is to standardize the length of immersion in No. 2 bath at twenty seconds, with fifteen minutes' contact with the bromide, and thirty minutes' contact with the transfer paper, and make the bromide of such a depth that on stripping it will be found to have just a trace of black in the shadows.

This means that a print on Illingworth's bromide paper should be very considerably darker than on Wellington's; in fact, it should be a trifle darker than would be required for sulphide toning, while the Wellington print should not be darker than normal; if anything a shade lighter.

It is not advisable to make darker prints

than described, as an increased time in No. 2 bath tends to impair the depth in the shadows, so that the beauty of the process is lost.

It may be useful to state the experience with various makes of bromide paper which have been tried:—With Kosmos, Criterion, Kodak, a good rich print a trifle darker than on Wellington is necessary. Paget should be half-way between Wellington and Illingworth.

Vitegas and Vittex Gevaert (after bleaching and re-development) require a print as dark as Illingworth's. All the above refer to matt papers; the semi-matt in the writer's hands have given considerable trouble with uneven patches.

Generally the best methods is to have the right bromide for the particular paper used, to standardize the times, and rely on hot water for control, except in the case of very hard prints, when the time of immersion in the No. 2 bath can be increased somewhat. A. H. Hall.

British Journal of Photography.

Reproduced Negatives

The loss of quality so often noticed in reproduced negatives which have been made by contact printing for either the transparency or negative is frequently due to the fact that very little of the glass used as a support for the sensitive film is flat enough to allow of uniform contact being obtained between the surfaces, firstly, of the original negative and the transparency plate, and secondly, between the transparency and the plate which is to furnish the new negative. In the case of same-sized reproductions both these conditions may be present, but even with one there may be quite a serious loss of definition. Every experienced lantern-slide maker knows that even with a plate so small as 3¼ inches square, the slides are much crisper if made through the lens than by contact. In making some enlarged negatives of subjects with very fine detail, we found it necessary to use a process printing frame with a ⅜-in. glass front, and to apply the pressure by means of strong screws. This ensured contact, and neither negative nor plate was broken. Failing this, it is better to make both transparency and negative on film or through the camera.

—British Journal of Photography.

FORTHCOMING EXHIBITIONS—1923

May 1st to 31st.—International Salon of the Pictorial Photographers' of America Latest date of entries, April 5th. Particulars from William A. Alcock, 65 East 56th street, New York City.

August 31st to October 7th.—San Francisco and Oakland International Photographic Salon. Last day for entries, August 11th. Particulars from H. A. Hussey, 64 Pine street, San Francisco, California.

November 5th to 17th.—Frederick & Nelson, 1923 Photographic Exhibition, Seattle Washington. A prospectus will be sent to those interested upon request.

THE AUSTRALIAN SALON OF PHOTOGRAPHY, SYDNEY, N. S. W. (1924)

This coming photographic exhibition is arousing much interest among photographers generally; it promises to be a big thing. The Association's officers are now attending to the details that will insure success. Entry forms are now in preparation, and any one interested should make application and it will be forwarded at the earliest date.

Address all communications to J. G. McColl, F. C. P. A., secretary, 379 Kent street Sydney, N. S. W.

For the Professional

In the Interest of Commercial and Portrait Photographers

Monthly Meeting and Dinner of the Photographers' Association of California, Held at Hotel Stewart, 6:30 P. M., April 9, 1923.

———o———

Mr. F. A. Webster, President of the Association, at the conclusion of the dinner, opened the proceedings by asking for a roll-call, each member present announcing name and occupation. At the conclusion of the roll-call, the President commented on the number of ladies attending from the East Bay district.

Mr. Edgar Felloes, Secretary of the Association, read the minutes of the last two meetings, which had been held at the Hotel Bellevue. The minutes were approved as read.

The Secretary read also the correspondence received since the last meeting, among which was a letter from Mr. Seron enclosing a clipping from a Bakersfield newspaper, relative to Mr. Seron's pictures at the exhibit of the last meeting of the Association. In his letter Mr. Seron said, 'If I were at your next meeting I would suggest that, at every meeting, time be given to every member to get up and tell us something of his experiences or trials, and how he solved them."

A letter received from Mr. Sigismund Blumann read in part as follows:

The enclosed legislation is of the greatest importance to legitimate photographers. At regular intervals large companies are formed who operate all over the country making enlarged solar prints and covering them with the cheapest and quickest air-brush work. These bunk concerns not only take thousands of dollars away from the legitimate photographers of each community, but they take these thousands of dollars out of the community and to some central location where the heads of the concern are situated.

That the matter is taken up in Congress and before the Federal Trade Commission should be the best proof to the Photographers' Association that concerted action and a strong association is essential for the welfare of their industry.

To those live members of the California Photographers' Association who belong for the purpose of bettering the general conditions of their profession and the general welfare of its professionals, this clipping will need no explanation.

The newspaper article referred to reads as follows:

FEDERAL TRADE COMMISSION

Appeal has been taken to the courts from an order of the Commission prohibiting false advertising.

Appealed Case—False Advertising:

Appeal has been taken to the Federal Circuit Court of Appeals for the 7th Circuit from an order entered by the Federal Trade Commission in its Docket No. 840. The order requires a portrait company which employs field agents from house to house for orders for portraits which the company makes from photographers, to cease making misrepresentations. The Commission found that the concern's agents, acting in accordance with carefully worked-out "sales talks," made statements to the effect that the company did not advertise but gave its customers the benefit if this economy, whereas at that time the company was advertising in certain farm journals. This statement along with other misrepresentations concerning the value of respondent's standard portrait, the company's claim of hand-made portraits, and the use of trade checks to indicate a fictitious value for portraits sold by respondents, the Commission found to be misleading to purchasers and prospective purchasers.

An interesting element in this case at the time order was issued by a majority of the Commission was a dissent on the part of one of the Federal Trade Commissioners. The dissent maintained that there was no evidence that anyone suffered from the misrepresentation and that therefore no public interest existed for issuing the order. The majority of the Commission held that competitors of the respondent were not given fair conditions of competition in the sale of portraits if respondent was allowed to make the misrepresentations above indicated.

Mr. Felloes: "The object of reading this is to draw your attention to the importance of getting together and killing this kind of business built on misrepresentation."

The President: "I would suggest that the giving of as much publicity as possible to such cases would be a good thing."

Mr. Terkelson: "Why not send a copy of this, at the same time asking for personal views on the question to all the members of the Photographers' Association?"

The President: "That is, send it out as a questionaire?"

Mr. Terkelson: "If it were sent to all photographers on the Pacific Coast it would bring our Association before them and show them the sort of work we were doing. Send one copy of this clipping and ask each photographer if he would stand back of a protest made by the Association against this kind of work. This would show photographers that we had an object in view. This would start a correspondence between photographers and the Association and show them that we were, as an organization, really doing something; and we would immediately have the interest of photographers."

Mr. Lancaster: "One of the first necessary steps in this matter is for us to gather evidence that would be evidence before the court to prove that fraud was actually done. This matter also pertains to those coupons sould under false representation, such as the pretence that by using those coupons you will get a certain percentage of discount when you go to the studio. We know this is done, but we have no proof. We should first get the proof and then send out our questionaire; then we would be able to appeal to the court, either as an institution or as an individual. By this Association taking those steps, we could go to the National Association and ask it to take action in the same manner."

Mr. McGovern gave some useful information and hints as to the best method of arresting this nuisance.

The President: "This is where the Association can get some effective publicity, by making these things known to the public, and so head swindling schemers off."

Mr. McGovern: "It will cost you nothing to pass a resolution here condemning the practice, and then have a committee of two or three to call on the Better Business Bureau."

The President appointed as a special Committee to take up this phase of the Association's work, Messrs. Terkelson, McGovern and Lothers.

It was thereupon moved, second, and resolved: That it is the sense of this organization that dishonest practices and misrepresentations in the sale of photographs should be stopped, and that this Special Committee be authorized to call on the Better Business Bureau with this object in view.

Mr. Lancaster proposed a vote of thanks to Hirsch & Kaye as follows: "I would like to have this organization extend to Hirsch & Kaye thanks for the wonderful thing they did for us in regard to the exhibit; they took the work from the boards of the display room, packed them very nicely with the names on them, then had a box made with a tight cover fastened with screws and sent them complete to the next exhibit point; and I would like to have the thanks of this organization sent to Hirsch & Kaye."

This was seconded and carried unanimously, and the Chairman asked the Secretary to convey this message to Hirsch & Kaye.

The President read a letter dated April 2nd from Eugene Swarzwald, President of the Photographers' Association of Los Angeles, which showed favorable progress in the southern City.

The President: "We shall get in some work tonight for the 1924 National Convention. I believe it is decided that we shall make a try for it, and I think we should take that matter up tonight and appoint a Convention Committee who will take charge of that phase of the business."

Mr. McGovern: "The first thing is to appoint a Committee of seven to call upon the San Francisco League. But what are the advantages to the individual members of this Association to be derived from having the Convention here? Will there be a financial advantage, or an educational advantage, or will it mean more people who will order photographs, or larger profits? I would like to hear from some of those who have been back East."

Mr. Felloes: "I was at the Convention last year, and it looks to me that we ought to have the Convention here, because the easiest way to improve in our work is to see the work that is better than our own. And there is no question that in that collection of pictures that I saw at Kansas City there were many examples that were very hard to come up to; and I think that any photographer who is interested in his profession would be only too glad to see different classes of work which are in his line, either commercial or portrait; it would be natural to suppose that he would take a great interest in it and learn something from it that would have a technical value for him, especially in the lectures and demonstrations by photographers who are reckoned experts in their own cities. These demonstrations are really practical, and we were taught how a model was lighted—all by artificial light—to obtain certain effects. The different demonstrators had their pet theories and were able to show how they got their effects and what they did to get them. Now, that is something worth having, because the best experience for us in this local Association is to measure our strength with our neighbors. But, if we can get an International Association here, we can measure our strength with the people who come from the East and elsewhere, and we can surely learn something. I believe there were about a thousand people at the Convention in Kansas City."

Mr. Terkelson: "What part of the expenses is the local Association expected to stand? Would we have to raise four or five thousand dollars to hire a hall?"

Mr. Anderson: "As you know, I am going back East in July to cover that Convention for "Camera Craft," and also hope to be one of your representatives there. This is an opportunity to read a letter that has been handed to me by Mr. Felloes. It comes from A. H. Diehl, President of the Photographers' Association of America, and reads, in part, as follows:

" 'The only obligation imposed or expected from local organizations is that of working through the Chamber of Commerce or such other civic bodies that may be helpful in securing Convention headquarters.' "

Mr. Lancaster: "We must get out of that spirit of what we can get out of it, we must get away from that entirely, and approach the matter in a public spirit, a spirit of "What can I do to help?' The hotels and business men, will receive the direct financial benefit, while we will feel the spiritual benefit in mingling with those men from the East; it will broaden us and give us a bigger view-point; and these things we all need. By the time you are bald-headed you will recognize that fact." (applause)

It was hereupon proposed, seconded and resolved:

That a Convention Committee be appointed, their function being to get the 1924 Convention to California.

The President appointed the following Convention Committee: Chauncy McGovern, Ralph Young, Walter Scott, L. F. Terkelson, Edgar Felloes, Miss Dahl and Mrs. Payne.

Mr. Anderson hereupon reported on the acquisition of two new members, Messrs. Howes and Hanson.

Mr. Terkelson asked that any of the members hearing of copies of photographs undelivered by house-to-house canvassers would immediately report to him, so that all cases could be investigated.

The President hereupon adjourned the meeting for a month, that is, to the second Monday in May.

Vancouver and New Westminster Photographers' Officers Installed

The annual installation of officers of the Vancouver and New Westminster Photographers Association was held last night at Leonard's Cafe when Mr. Wilfred Gibson of Victoria, president of the Photographers' Association of the Pacific Northwest, in a neat speech, installed Mr. George F. Chapman as president of the local body for the coming year. Mr. Gibson also installed Mr. John Wardlaw of North Vancouver as vice-president, and Mr. Harry Bullen as secretary-treasurer.

In the course of his remarks, Mr. Gibson gave the Vancouver men the latest developments relative to the convention of Pacific Coast Photographers which will be held in Victoria in August this year. Victoria is out to excell anything which has been done before at photographers' conventions and particularly to have educational features which will improve the work of all Coast photographers. The Vancouver men decided to go over practically in a body and will make preparations to this end.

It was decided at the meeting to cooperate with the B. C. Manufacturers' Association to the extent of showing photographs on the fifth floor of the Manufacturers' Building during the Building Exhibition which opens next Saturday.

See Illustration on Page 243

The New President of the Professional Photographers' Association of Great Britain and Ireland

——o——

An interview with Jenkyn Griffiths, F. C. S.

——o——

Mr. Thomas Chidley, of Chester, who has just been elected President of the Professional Photographers' Association, for the Session 1923-1924, is rather reticent to talk about himself, and it is only after considerable difficulty that I have been able to gather a few facts about his career.

Possessing a sense of rather dry humor, it was difficult to correlate all he said.

On asking him his date of birth, he replied, "Well, my mother said I was born on August 15th, but when I wanted a birth certificate for insurance purposes, I found it was the 14th, so I suppose I arrived a day too soon, and now I am taking the Presidency of the P. P. A. too soon to be able to do the position that justice it demands."

The most amusing experience I have had in my life as a photographer, was in being summoned before the magistrates by the War Office, for taking a photograph to the order of the Ministry of Munitions, during the war, result fine £5, which the ministry paid, over 100 good sympathetic notices in the press, and which I followed up with half-column advertisements in the local papers:—"T. C. Official Photographer to the Ministry of Munitions," which brought lots of commercial work.

I believe a photographer should enter every possible phrases of social city life not only for his own sake, but for the good of photography generally.

My principal relaxation is music. In my time, I have been organist, choirmaster conductor of a Male Voice Glee Club, taker principal parts in Amatuer operatic shows stage manager of amatuer theatricals secretary of a tennis club, and I can hi a golf ball—sometimes. But I shun pol itics as I would a railway sandwich, whicl accounts for my having declined invitation to the City Council.

Mr. Chidley, in addition to his interest i photography and his monthly visits t London, merely for the purpose of attend ing the Monthly Council Meeting, is member of a Rotary Club, P. M. of Masonic Lodge, and present I. P. M. of new lodge.

We are sure that all photographers wis power to Mr. Chidley's arm, that he ma be able to enhance the progress of nc only the P. P. A., but of Professiona Photography in general. A task for whic we feel that he is fully equipped, both a regards business accumen, and genera capability.

EXECUTIVES OF THE VANCOUVER AND NEW WESTMINSTER PHOTOGRAPHERS' ASSOCIATION

From Left to Right—Top Row—W. H. Calder, John Wardlaw, W. J. Moore, Geo. T. Wadds.
Bottom Row—Left to Right—H. Bullen, secretary-treasurer; K. McKenzie, A. T. Bridgman, P. W. Rowe, G. F. Chapman, president; J. Vanderpunt.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

For The Beginner

(Continued from March)

Negatives from Bromide Enlargements

The importance of a suitable negative for best results in enlarging can not be overestimated. It saves much trouble in after manipulations, it is the most practical way to secure uniformity in our work. It is generally known that we can improve our work by doing our exposure, through shading certain portions of our negative. This method gives good results with experience, at the same time it is founded on guess work and has that disadvantage. Where the worker needs only one print, there is excuse for adopting this short cut, but for the student of this branch of photography there is profit in learning how to make the faulty negative right, it saves money.

In the case of negatives having too strong contrasts, which are common in snapshots and undertimed, overdeveloped exposures the following method of treating the negative has much to recommend it and the reader should note the following for sooner or later he is sure to find this method of value to him.

Harmonizing Harsh Negatives

This very valuable process is deserving of more attention than it receives. It is the ideal method of treating an undertimed overdeveloped negative. By this method we can reduce the harsh lights and intensify the weak shadows somewhat. The negative after being fixed and well washed is soaked in the following solution:

Potassium bichromate	1 part
Hydrochloric acid	3 parts
Alum	5 "
Water	100 "

In this the negative gradually turns white, and it is imperative that the bleaching action be allowed to continue until the negative is perfectly white, both front and back. Now wash the negative thoroughly for an hour in running water.

The next operation is the redevelopment of the photographic image. An old hydroquinone developer is recommended for this purpose, its slow action is very desirable. Place the thoroughly washed negative in a tray of this developer and watch it carefully, development must be only carried on till the details in the shadows are fully developed, but on no account must it be continued until the lights are blackened or we could not improve our work. As soon as the details in the shadows and half tones are done, rinse the negative and refix it, there being some undeveloped chloride of silver at the back of the dense parts; this the hypo will remove, with the result that the negative will not be as harsh as before. The process may be repeated if further reduction is desired, it can also be overdone, as each time we are reducing contrast.

Some workers have recourse to Ammonium Persulphate to reduce negatives having too great a contrast. I do not think this method equal to the one just described. The following stock solution is suggested by Mr. H. W. Bennett:

Ammonium persulphate	1 oz.
Sodium sulphite	96 grs.
Sulphuric acid	48 mins.
Water	10 oz.

For use, dilute 1 part with 9 parts of water. When reduction is complete the negative should be placed in a 5 per cent solution of sodium sulphite, this instantly stops the reducing action, the plate is then washed and dried.—E. F.

About Sky-Filters

Why is it that the average amateur always represents the sky in his landscape prints as being so much white paper? He knows or has read about color filters and their uses, but, as the use of them means taking along a tripod and giving at least a short time exposure with the average

Kodak equipment, he forgoes the pleasure of having correct color values in his prints. As to whether he is right or wrong we will leave alone for the present and take that up at some future date.

Owing to the great difference of light between the foreground of the landscape and the sky, it is very difficult to get a correct rendering of both without the use of some other attachment, the sky requiring approximately 1/10th the exposure of the foreground, so that if we give the correct exposure for the sky the landscape is underexposed and again, if we give enough exposure to get foreground detail we lose our sky gradation.

Now if we were to use a color filter, we would overcome that, but as I said in the beginning, that means a tripod and just at present we can't be troubled with it.

There are on the market graduated filters, more commonly known as sky filters, one half is stained a light yellow and the remainder is entirely colorless. To use them they are slipped over the lens hood with the yellow or stained portion covering the upper part of the lens, and the clear, the lower half. The use of the filter increases the exposure slightly, the yellow part holds back the light action of the sky and the distance of the landscape, while the foreground being covered only by the clear glass gets full exposure, giving us a harmonious gradation throughout the picture.

Another thing we want to remember—the sky filter is for use, not only when there are clouds, but also when there are none. Proper tone rendering of our sky is just as essential to the landscape whether it is clear or not.

There are two types of subjects that I have found the sky filter not suitable for; one is the landscape with foreground subject, especially flowers where the yellow and red colors predominate, for this the color filter (not the sky filter) is the one to use. The other subject is close up portraits in the open, if you use the sky filter you will underexpose the top (or head and shoulders) and they will print up too dark and lack the punch they should have to predominate the final picture. P. D. A.

Our Book Shelves

The British Journal Photographic Almanac—1923

This invaluable annual should be on the shelves of every progressive photographer. To the professional and amatuer alike it will prove one of the best book investments of the year. This work is packed with useful information. The formulas alone crowd each other and it would be difficult for anyone in search of anything on this subject not to find something but it would meet with his needs perfectly. Old formulas half forgotten though of still valuable processes are here, and also the very latest advice on new research occupies its alloted space.

In this 1923 issue, Mr. George E. Brown, Editor, under the caption "What Camera and Lens to Have" devotes twenty seven pages to this important subject. Many a beginner has spent far more than the price of this volume to acquire this information, for has not the wish often been expressed "I am sorry that I did not buy another make of camera." No one who reads this article will fail to acquire a very much better understanding of his needs than the altogether dim idea he formerly had.

The British Journal Photographic Almanac may be obtained through your dealer or George Murphy, Inc., 57 East 9th street, New York. Price paper edition $1.00, in cloth $1.50.—E. F.

How To Plan and Advertise a Sale

Albert E. Edgar. Advertising World. Paper covers. 43 pages.

Specialization has been carried to the ultra-intensive in this pamphlet. Merchandizing will in time become so definite a science, that we can conceive of its being assigned a place in the curriculum of the colleges for exact study.

Mr. Edgar begins at the beginning of the subject, and pursues it to the ultimate. There is not enough left unexplained to offer material for one question. "Planing a Sale" and its subdivisions of "Reasons for a Sale," "What a Sale Will Do," "Preparing for the Sale," etc., to "Clean Sweeps," "The Last Day," and "One More Chance," every possible matter has been covered. The advertising copy is shown in various layouts—but why expatiate? We submit the little booklet to every retail merchant and sales manager as worth his while and suggest that it might prove enlightening to the people behind the counter who have an interest in their occupation and an ambition to rise. Published by The Advertising World, Columbus, Ohio. Price $1.00, postpaid.—S. B.

How To Get More Business

Albert E. Edgar. Advertising World. Board covers. 142 pages.

We had occasion to commend Mr. Edgar for his complete knowledge of his subject and his thoroughness in covering it on a previous occasion. He earns that commendation for this book. Irrespective of the cost of the volume (which is not given on the cover or elsewhere that we could see), its value is in proportion to the degree in which a concern needs more business and in which the text can succeed in helping to ways and means toward that obtention. To the astute business man much that is dealt with will come as nothing new, but to most it brings novel viewpoints, ingenious wrinkles, fresh ideas —and even to the wisest aids to crystallize the more or less too readily accepted casual into concrete thought. And such thought leads to action.

The part devoted to Show Card Writing is in itself worth the time and cost, whatever the price, for it is quite a complete instruction text-book, with copious illustrations of alphabets and designs. The Window Display section is a masterpiece of condensed "complete Instruction."

That none may duplicate their buying, we wish to state that the two previous pamphlets are fairly well covered under this one heading, and "How to Get More Business" will be found a very valuable addition to the desk library. Published by The Advertising World, Columbus, Ohio. Price $2, postpaid.—S. B.

3671 Advertising Catch Phrases and Ideas

Advertising World. Paper Cover. 76 Pages.

This unique brochure not only fills a want but creates a place for itself. At a period when the "Phrose is the thing" and every widely advertised article has its slogan, these 3671 sententious epigrams and terms serve to supply something ready made and better still, to suggest and inspire to original creation. Published by The Advertising World, Columbus, O. Price 50 cents S. B.

The American Annual of Photography, 1923

By Percy Y. Howe, Editor

The Annual is a valuable addition to the photographers' library, and its publication each year is eagerly looked forward to by a great number. It not only comprises within its covers many fine reproductions of pictorial photographs, but also its many articles on the control processes and technical subjects are of great assistance. The readers' attention is especially drawn to the article by Paul L. Anderson on Carbon and Carbro for Portraiture. Mr. Anderson's articles are always up to the minute and of great value. The article on Desensitisers, by Marcus G. Lovelace, is also a timely subject. We would also draw your attention to a Method of Registration for Multiple Printing, by William H. Zerbe (which we republished in this issue of Camera Craft).

The collection of photographic formulaes should prove very useful, as also the list of American Photographic Societies published at the end of the book.

Geo. Murphy, Inc., New York. Price, paper $1.75, cloth $2.50. —P.D.A.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

California Camera Club

We called at these club rooms especially to see the interesting exhibition of bromoils by Mr. L. A. Goetz. When it comes to bromoil technique, we still think Mr. Goetz is still equal to the best of them, and these pictures are well worthy of special study; they serve to set a higher standard for the student to work to.

The subject for the April print competition will be "Fruit Trees in Blossom." This should yield some very attractive pictures, and the competitors have a wonderful opportunity to show their skill in delineating the miles of orchards on the outskirts of San Francisco.

April 10th was the date fixed for the election of new officers. This is the regular official ballot:

For president, Edward H. Kemp; first vice-president, Dr. E. G. Eisen; second vice-president, V. A. Kuehn; secretary, Wm. C. Mackintosh; corresponding secretary, H. Hirschler; treasurer, K. Baumgaertel; librarian, J. R. Wilding; director, C. E. Wise, J. C. Eriksen, W. F. Ohlson, and H. M. Sawyer.—T. D. Fields, chairman nominating committee.

Newark Camera Club

The Ground Glass, bulletin of this club, has a very effective picture by Dr. J. B. Pardoe, entitled "Waiting for the Train," as its cover embellishment. This picture won the gold medal in this club's print competition for 1923, and is a good specimen of genre photography and an excellent example of effective composition.

We think the following clipping from the club's bulletin is an excellent idea, and will furnish a valuable suggestion to other camera clubs:

Something New Under the Sun

A special committee appointed by the president has devised and had printed a card of invitation to inspect our clubhouse. The means of distribution will be by members, who are expected to place these cards where they will do the most good. You will come across men every day that you are out scouting for pictures, who would be pleased to know of the facilities we have available, and we look to each and every member to do his bit. Your request for a supply will be the only way we shall know you are interested. A sample card is enclosed.

The Newark Camera Club, Inc., extends to you a cordial invitation to inspect their club rooms at Twenty-seven Franklin street, Newark, N. J. Any member will take pleasure in showing you completely equipped photographic studio, exhibition and work rooms for the novice, amateur and pictorial photographer. Monthly exhibits by noted pictorialists.

Introduced by.....

ANNOUNCEMENT

The Southern California Camera Club, as an organization, is no more. Instead, it is now a branch club of the Southwest Museum, Inc., and is therefore a part of that great institution. A drive will immediately be started for funds for the erection of a $10,000 building for housing this branch of the Museum. This building will be a model of its kind, being specially designed for its purpose, by Mr. Wm. M. Clarke.

We had hoped to be able to publish a sketch of the proposed building in this issue, but will have to postpone it until next month.

To raise funds for the erection of the building, we will solicit life memberships in the club. Life memberships (non-transferable) are at the present time only One Hundred Dollars each.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.

If there is no officer in your State, address the General Secretary

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

STATE SECRETARIES

California—A. E. Davies, 1327 Grove St., Berkeley.
Colorado—H. E. High, 1023 Champa St., Denver.
Idaho—Eugene Clifford, 902 9th Ave., Lewiston.
Iowa—Harry B. Nolte, Algona.
Kansas—H. H. Gill, Hays City.
Louisiana—Samuel F. Lawrence, 1754 Laurel St., Shreveport.
Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.
Missouri—J. F. Peters, Room 408, Union Station, St. Louis.
New York—Louis R. Murray, 927 Ford Street, Ogdensburg.
Oregon—F. L. Derby, La Fayette.

NEW MEMBERS

5247—H. S. Sears, Photographer, Atascadero, Calif.
Any size up to 8x10 or 7x11 Azo, Artura Sepia Portraits, all grades for views, any type subject desired; for art portraits, nudes, and novel subjects. Class 1.

5248—W. D. Hall, "Dunboyne" Ryde Road, Seaview, Isle of Wight, England.
Most 3¼ x 4¼ also 7 x 5, 6½ x 4¾ and 3½ x 2½ Wellington Bromide, or S. C. P. also carbons of ocean liners (most of the notable ones), English landscapes, animals, etc. I have some Paget colors transparency 3¼ x 4¼; for local views, native types, anything pictorial, also figure studies undraped, etc.
Class 1.

5249—E. M. Dunbar, 15 Rowena St., Boston 24, Mass.
I desire to exchange only nudes. Class 1.

5250—Andrew G. Olson, Eagle Bend, Minn.
3¼ x 5½ and post cards, Azo, Cyko of views and landscapes; for the same or anything of pictorial interest, post cards only accepted. Class 1.

5251—Arthur A. Taft, Seneca, Wis.
Class 2.

5252—T. Newstrum, 800 E. Fifth St., Ellensburg, Wash.
2½ x 4¼ and 3¼ x 4¼ Velox of Washington mountain scenes and water falls; for anything of interest. Class 1.

5253—Mrs. Earl Peerce, Moorhead, Iowa.
Class 2.

5254—Masana Rokkaku, 548 Kami Osaki, Tokyi, Japan.
Class 2.

RENEWALS

2095—G. G. Stortz, 2611 N. 8th St., Philadelphia, Pa.
3¼ x 5½ Azo of landscapes, historical buildings and city views; for all kinds. Class 1.

4456—Harry J. Fromm, 424 First St., Roselle, N. J.
4 x 5, 3¼ x 5½, and 5 x 7, general views and home portraits of children on D. O. P. paper; for the same. Class 1.

4790—Geo. E. Bowman, Giant, Calif.
5 x 7 and 3 x 5 Azo, Velox of general views of mountain, beach and park scenes and animals; for anything of general interest. Class 1.

5183—Homer D. Cornelius, 410 So. Ashland Blvd., Chicago, Ill.
2¼ x 3¼ and 2½ x 4¼ glossy finish of Yellowstone Park, Yosemite Park and subjects of general interest throughout the Western States; for historical or any interesting subjects within the U. S. Class 1.

CHANGE OF ADDRESS

4472—Harry E. Carpenter, 389 Remington Ave., Bridgeport, Conn.
(Appeared in Jan issue as 23 P. O. Arcade, Bridgeport in error.)

5133—Geo Engelson, General Delivery, Los Angeles, Calif. (Was Yakima, Wash.)

Post-Card Album Division

The ninth issue of the semi-annual post-card albums was circulated from the Camera Craft office during April (the tenth or October issue, as usual, will be routed from the East). Many contributors to the recent issue have post-cards for several albums in advance, and the current issues of these will reach them with pleasant greetings in successive order.

Participants of this number comprise the states of California, Oregon, Texas, Missouri, Iowa, Minnesota, Michigan, Ohio, Kentucky, Delaware, Tennessee, South Carolina, Pennsylvania, Connecticut, and New York.

All readers of our magazine are eligible to enter prints; especially desired are those from states not represented as yet. Write or send your contributions to the director prior to October, and commence with the next issue.—Fraternally yours,

JOHN BIESEMAN,
Album Director.

Notes and Comment

Reported by Wm. Wolff

Gordon Gribbon, in charge of Kodak Department in Bullock's, Los Angeles, is some live wire. He has tripled the department's business since he has taken charge.

Frank Aston, of San Luis Obispo, is building a ground floor studio on the main street of his town.

Fred Twogood, of Riverside, is known as the Oil King in his city. He has big holdings in Signal Hill district.

The Jones Photo Supply House, San Bernardino, has moved to new location.

Tony Babb, of Los Angeles, went to Rochester recently.

Frank B. Howe, of P. & A. news in Los Angeles, is doing some very fine work.

Frank Kamiyama of Fresno, was in San Francisco recently, his wife being sick in the hospital.

C. W. Courtney, a Los Angeles photo stock dealer, was in San Francisco recently. Ansco St. Clair had him in tow showing him the sights.

W. A. Gillette of Colusa, is in San Francisco, convalescing after recent illness.

L. M. Powell of Hanford, had a narraw escape on his last visit to San Francisco. Driving up during the recent rains he was crowded off the road by one of those road hogs and was sent partially off the grade. It required services of the Big Truck to pull his machine back on the road.

Montgomery Studio, Grass Valley, is Swamped with work, as is Harmon Adams of Woodland.

We always know when a meeting of the Photographers' Association is to take place because H. Lancaster of Martinez, Cal., gives us a call.

The retouchers employed in Hirsch & Kaye's Professional Finishing department are wondering if Christmas hasn't come again. They have been receiving plenty of work from professionals all over the State.

International Photographic Arts & Crafts Exposition

Ansco Company have signed for a large section of space and will put in probably what will be the most comprehensive educational exhibit that has ever been installed in any Photographic Exposition.

National Exposition Co.
Managers.

Many Offer To Lend Albums

Floyd Vail, director of the pictorial section of the International Photographic Arts and Crafts Exposition, to be held at the Grand Central Palace, April 21st to 28th, recently wrote the newspapers of New York asking for photograph albums. As a result he has received many letters offering to lend these heirlooms for exhibition purposes. Many valuable collections have been discovered and they will be shown to the public at the exposition opening.

"Slowly and surely the old family albums are being brought back after a rest of more than half a century," said Mr. Vail. "The backs of the albums I have uncovered are embellished with mother of pearl or small mirrors. The album passed from common usuage to the attic but not from the hearts of the descendants of those people housed between the plush covers."

S. C. Schenck, of Metuchen, N. J. has offered to lend his collection which will show almost the first results of the photographic art. A complete collection of photographs of generals on both sides in the Civil War has been unearthed by Miss Jane T. Jones of South Jamesport, L. I. who offers to lend them to the exposition.

"Hoopskirted ladies in all their pristine glory," "Citizen" Train, Lew Wallace, King Otto of Baravia and many other celebrities in picturesque costumes, will be displayed from the collection of Miss Luella Stewart, 167 Washington Park, Brooklyn.

Frederick & Nelson, 1923 Photographic Exhibition

Dates for the fourth annual photographic exhibition, conducted by Frederick & Nelson, Seattle, Washington, have been set for November 5-17. This exhibition, which is in effect the Seattle Salon in the absence of a local camera club, is conducted by Frederick & Nelson in strict conformity with the largest salons in the East and California, and this firm's fine auditorium insures the showing of prints under the very best conditions.

The exhibition given last November was attended by 6,000 persons and there were approximately 1,100 entries. The principal prize winners included such well-known pictorialists as Laura Adams Armer, Berkeley, California, Karl Struss, Hollywood, California, and L. A. Goetz, Berkeley, California.

A prospectus covering this year's exhibition has been prepared and will be sent to those interested upon request.

McCurry's New Studio

We recently had a visit from Harold J. McCurry, who gave us some advance information on plans of the McCurry Photo Company, Sacramento, California.

Mr. McCurry has just acquired a building and lot on 8th and I streets. He is particularly pleased in having a 40 x 20 feet plot at the back to be converted into an outdoor studio. It is planned to grow ivy on the surrounding walls, grass is to be sown in its place, and shrubs with a fountain will add greatly to the beauty of the place and supply natural backgrounds to those pictures that require this treatment. There is no doubt there will be some very effective photographs produced from this studio, and it will create a demand for this kind of realistic work.

Mr. McCurry is a very practical man, as the following will show: There is a plan made of each of the workrooms to scale, and by the aid of the various accessories built in cardboard, also to scale, the owner can visualize perfectly the occupation of his floor space by the furnishings, with the very practical object of saving steps.

We hope later to publish more particulars and plans with explanatory drawings.

Meteor Chemicals

Mr. H. E. Kuhn, assistant sales manager of John G. Marshall, manufacturing chemist of the Meteor Chemicals, Brooklyn, N. Y., recently paid us a visit on his coast trip. Mr. Kuhn reports that the photographic business for this year had a most encouraging outlook, his sales showing a steady increase from the month of January.

We were also advised that Hirsch & Kaye of this city had been appointed distributing agents for the Meteor Chemicals in this section.

Announcement

Mr. W. Green, who has for over five years been manager of Burke & James, N. Y. branch, is now with the J. L. Lewis, Inc., organization. Mr. Green's long and practical experience in the photographic trade mark him as a valuable man to his new employers, and those of our readers doing business with the above firm will also find Mr. Green at their service.—J. L. Lewis, Inc., 132 W. 32nd street, N. Y.

Mr. Edwin Scouler

Many photographers, both amateur and professional, will learn with regret of the passing of Edwin Scouler, which took place on February 18th. He was about 58 years of age.

Mr. Scouler was one of the very best of San Francisco's craftsmen in the line of photographic apparatus. He went into the employ of Hirsch & Kaye when quite a young man, and remained with this firm until his death, and thus terminated thirty-five years of steady employment with the same concern, by whom he was greatly esteemed. During these many years practically every type of camera and lens had passed through the hands of Mr. Souler, and his technical knowledge, owing to his natural aptitude for his business, developed a wonderful skill.

It might be mentioned here that camera building and repair work came to Mr. Scouler much as an instinct. His father was a camera builder before him, and this was quite in the early days, and so the name Scouler has been linked with modern photography from its inception.

X No. 6 JUNE, 1923 Price 15 Cents

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CAMERA CRAFT

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CALIFORNIA

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PAUL OESTING,
President

I. M. REED,
General Manager

CAMERA CRAFT

A Photographic Monthly

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CONTENTS FOR JUNE 1923

Santa Barbara Mission (Frontispiece) ..... By Samuel Adelstein
Missions of Santa Barbara and Santa Ynez ..... By Samuel Adelstein 253
II.—The Oil-Print Process ..... By A. Niklitschek 261
Tray Cleaning ..... By Carl W. Beese 265
The "Shipman Process" Enlargements ..... By Joseph Shipman 266
Some Adventurings in Photography ..... By Sigismund Blumann 272
I.—Enlarging Papers.
"Christ in the Temple" (Illustration) ..... By J. W. Beattie 275
Home Portraits ..... By Frank Reeves 276
The Legerdemain of the Advertising Camera ..... By a Commercial Art Manager 281
Editorial 285
On Being Different.
A Photographic Digest 286
Fireproofing Fabrics—Development in Relation to Contrast in the Subject.
For the Professional 289
Monthly Meeting of the P. A. of C.—41st Annual Convention P. A. of A.
The Amateur and His Troubles 296
Exposure—Cleanliness in the Dark Room.
Club News and Notes 297
International Photographic Association 298
Notes and Comment 299
Our Book Shelves 300

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China - - - - - - - - - - Squires, Bingham & Co., Shanghai
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New Zealand - - - -Richard Hill, Matlock House, Devonport, Auckland
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PHOTOGRAPHERS' ASSOCIATION *of the* PACIFIC NORTHWEST

will hold a Convention

August 28th, 29th, 30th and 31st

We want every photographer possible to come, especially those living in Idaho, Montana, Oregon, Washington, and British Columbia. Photographers in these five states are also invited to send exhibits.

Visitors are welcome. It is a beautiful drive to Victoria, with ferry connections from the states and a wonderful boat trip.

The International Display of photographs direct from Washington will be one of the attractions.

Ship everything for convention display (in bond) to

WILFRED GIBSON, President *Victoria, B C., Canada*

SANTA BARBARA MISSION

By SAMUEL ADELSTEIN

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
EDGAR FELLOES, Associate Editor
P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX JUNE 1923 No. 6

Missions at Santa Barbara and Santa Ynez

By Samuel Adelstein

With Illustrations by the Author

Of the twenty-one missions founded in California during the Franciscan epoch (1769-1833), but two are at present occupied and under the control of that order, namely, Mission San Luis Rey de Francia, in San Diego County, and the Mission at Santa Barbara.

Santa Barbara was the sixteenth mission, and was dedicated December 4th, 1786, and is now the mother house of the newly-established Franciscan Province of Santa Barbara of the Pacific Coast, comprising the states of California, Arizona, Oregon, and Washington.

The Mission, named after Saint Barbara by the early missionaries, is located about a mile from the heart of the city, and is easily reached by street cars. It is one of the best-preserved, most interesting, and most beautiful of the old Franciscan Missions now standing in California. None other occupies a position so commanding, and, because of its ease of access, none other has been "shot" so often by amateurs and professionals alike.

It is the most popular and interesting of all the California Missions, and Brother Michael, the highly efficient guide, is busy from eight-thirty in the morning to five in the afternoon taking flocks of visitors through the various rooms and showing and explaining the many objects of interest. The rapidity and fluency with which he delivers his thirty-five-minute constant talk was a source of wonder to me.

In the library, located in the cloisters adjoining the church, is a valuable collection of old volumes from different Missions when they were abandoned. Among them are several remarkably fine Spanish manuscripts, records of the old Missions. Adjoining the library, in the room of curios, in a large case are three huge parchment volumes of the principal offices as recited by the missionaries. These volumes are in good condition, the lettering is large, traced by hand, profusely and richly ornamented, representing years of labor. Probably the first object of interest to many are the manipole, stole, and burse belonging to Father Junipero Serra.

SANTA BARBARA MISSION

One case contains a very interesting relic—several old volumes of ancient music as sung by the Indians. The notes are of different colors, an idea originating with one of the padres as a means of teaching the Indians to sing.

In the cemetery gardens adjoining the church, which appears to cover about an acre of ground, are buried about four thousand Indians. You are told that they lie four or five deep. In this cemetery are buried the Fathers, also prominent Catholic Barbarenos.

The original chapel or church was built in 1787, and was 15 x 40 feet, with walls of adobe about three feet thick. The roof was made of heavy rafters, to which were tied long poles or cranes. Soft clay, covered with a thatch of straw, was spread over these poles. After 1788, tiles were made, replacing these straw roofs, which were no longer used. Proving too small, the old structure was taken down and a magnificent edifice took its place in 1793. Its size was 25 x 125 feet. An earthquake damaged the building to such an extent that it had to be taken down. On its site rises the splendid structure which is still the admiration of the traveler. It was five years in building from 1815 to 1820.

The present building is constructed entirely of native sandstone, and is the most solid structure of its kind in California. It is 42 x 165 feet and 30 feet high on the outside, and is roofed with tiles that were made by the Indians in the early Mission days. The walls are 6 feet thick, of irregular

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FATHER JOSEPH ROHDE, VICE-PROVINCIAL OF FRANCISCAN FATHERS OF THE PACIFIC COAST, SANTA BARBARA

sandstone blocks, and are further strengthened by solid buttresses measuring 9 x 9 feet.

The double towers, which are a distinctive feature of this Mission, rise to a height of 30 feet, and are a solid mass of stone and cement 20 feet square. A narrow winding staircase leads through the left tower to the belfry, where, as of yore, the old bells call the faithful to services.

It is from this belfry that one may get a good view of the "Forbidden Garden," and it would seem that every female visitor climbs this tower to get a long-distance view of this beautiful spot.

The front facade is supported by eighteen imposing arches of Roman design, under which is a paved corridor or colonnade upon which the cloisters open.

BROTHER PLACEDUS, THE OLD PEPPER TREE AND THE FOUNTAIN, SANTA BARBARA

The best time to "shoot" the interior of this beautiful colonnade is very early in the morning, when the light is soft and the rising sun penetrates its interior; thus one secures the beautiful long-cast shadows which appear on the floor and wall, but which are utterly impossible later in the morning.

I had the privilege of photographing Father Joseph Rohde in this colonnade. He was most patient and kind. I also photographed him at the door of the church opening from the cemetery gardens. Over this door are three genuine skulls and crossbones, as shown in the photograph accompanying this article. Father Joseph Rohde is the vice-provincial of the Franciscan Order of the Pacific Coast—a highly cultured gentleman, whose unfailing courtesy was a source of pleasure and grateful remembrance.

The best time to "shoot" a direct or front view of the church is also very early in the morning. I shot the front at 7:00 a. m. and the colonnade at 8:00 a. m. in October, to avoid the cold harsh light on the white exterior of the building later in the forenoon.

To get a good side view of the Mission, showing the exterior entrance, steps, arches, and fountain, one should stand a little below the fountain and "shoot" at about eleven o'clock in the morning, for then the sun is just high enough to cast the high light in the most effective places, and the front of the building itself is more or less in the shadow.

MISSION SANTA YNEZ

To get a good view (facing the church) of the old pepper tree and fountain and part of the arches, the early morning is best. To get a good view of the fountain, flanked by its guardian, the old pepper tree, the late afternoon is best. Here I was especially fortunate in securing an excellent pictorial photograph of the venerable Brother Paschal under the pepper tree and in front of the fountain.

In an angle at the rear of the colonnade, formed by its junction with the church, is a beautiful formal garden, for the private use of the Franciscans, like the cloisters, and therefore closed to the public. This is called the "Forbidden Gardens"; with the exception of the wife of Ex-President Harrison, Princess Louise of Lorne, and Queen Elizabeth of Belgium, no women have ever been allowed to enter this garden. I tried to learn why this garden was "forbidden," and was told that it was a rule of the Franciscan Order. A beautiful view of the Forbidden Garden may be obtained from the church tower. I was permitted to visit the garden several times, and was fortunate in securing an excellent photo of the affable Brother Barnabas standing in front of the pool in the center of the garden. I also made a photograph of the Father Superior in the same place.

The Franciscan garb consists of a dark brown, plain, long-sleeved tunic, reaching nearly to the ground, confined about the waist with a knotted

FATHER QUINN, THE COLONNADE, SANTA YNEZ

cord of white, the cord of St. Francis, representing symbolically a halter or bridle of a subdued beast, for such it pleased St. Francis to consider the body in subjection to the spirit. A small cape, pointed hood, and sandals complete the habit. It appeared rather incongruous to see some of the brethren walking about the streets of Santa Barbara in their sandalled feet and wearing derby hats.

The frontispiece view of the Mission was taken at a long distance with the rear element of my 7-inch Verito lens, making it practically a 11-inch focus lens, which at F 16 makes everything sufficiently sharp. In passing, it may interest workers to know that, although the makers recommend giving double the exposure when using the rear element of the Verito lens, I always give just the same exposure as when using my Carl Zeiss Tessar lens, with unfailingly excellent results.

The very interesting and little-known Santa Ynez Mission, located in the Santa Ynez Valley, is a fifty-mile auto ride from Santa Barbara. It is one of the most beautiful rides in California by way of the coast and Gaviota Pass, and return by way of the San Marcos Pass over the Santa Ynez Mountains. This Mission is located on a plateau overlooking the Santa Ynez River and facing the Santa Ynez Mountains. It has neither telegraph

REAR VIEW, MISSION SANTA YNEZ

nor telephone connections, and, because of this isolation, is seldom visited by the ordinary tourist, and is not "shot" to pieces by Kodakers, etc.

As a matter of fact, there is a board sign about six feet long attached to the fence at the side of the Campanile, or bell tower, on which is painted in large letters "Photographing is prohibited; ask permission." Until recently, there were very few habitations in the vicinity of the Mission. About nine years ago a colony of Danish settlers from the East purchased a large tract of land adjoining the Mission and established the village of Solbang.

Santa Ynez Mission was the nineteenth Mission founded by the padres, and was established in 1804, dedicated 1817, secularized in 1836, abandoned in 1850, and restored in 1905.

On my first visit to the Mission, I arrived at just before noon, a very unsuitable time, as the light was high overhead and unpropitious for good results. However, having made this long one-hundred-mile round trip, I determined to do the best I could. Padre Alejandro Buckler kindly gave me permission to photograph, and the results, while not satisfactory, determined me to visit later, when I could choose my own time. I made a special trip in about two weeks time, leaving Santa Barbara by auto, to

arrive in Solbang late that afternoon, when I secured some very beautiful sunset views.

I stayed over night at the little hotel in Solbang, and arose next morning at six to find the ground covered with a heavy frost, the first of the season (late in October). The weather was clear, cool, and crisp, and at seven o'clock I began to "shoot." Father Quinn, the new pastor in charge, consented to my removing the offending "Photo Prohibited" sign, and I was fortunate in securing some views of this interesting Mission and a picture of Father Quinn in the colonnade that were well worth the trouble. Because of its simplicity, the interior of the Santa Ynez Mission appealed to me more than the Santa Barbara Mission, with its gorgeous and ornate altar. The Mission also contains many interesting relics of the early Indian days.

All of my work is done with an Ensign 3¼ x 4¼ Reflex Camera, equipped with a Carl Zeiss Tessar lens, 6-inch focus, using film pack, developed in tank. My enlargements are made on Artura Carbon Black with Verito lens.

Note.—Mr. Adelstein will spend the summer in Santa Barbara, and will give three exhibitions in the public library. Two of these will be prints of this city from negatives made last summer. The third will comprise a miscellaneous collection of landscapes, marines and figure studies.

A SHIP OF THE DESERT

II. The Oil-Print Process

Specially Written for Camera Craft

By A. Niklitschek, Vienna Photo Club
Translated by Dr. Ingo Hackh

The Reprinting or Transferring

First consideration for successful oil-printing is the selection of a proper motive, and we must be guided by the thought that in this method we diminish the large number of fine and finest modulations and shades to a few major shades and thereby produce the characteristic mass effect. While an experienced technician might utilize every motive and by means of combined transfers produce good results, the tendency of the methods is the production of simple mass-effects. The pictures accompanying this paper illustrate this. Let us follow their development:

10A BROMOIL PRINT PIGMENTED FOR REPRINTING

10C, THE ELEVENTH REPRINT ON CARDBOARD

The pigmented bromide-oil-print (on Mimosa paper) size 16 by 24 cm (=6½x9½ inches) (Fig. 10a) shows the strong contrasts. The edges, not belonging to the picture, are cut off entirely. This trimming is necessary for if the edges are left they tend to adhere to the reprint. In order to avoid adhesion, especially in the lights it is well to moisten the reprint paper with a moist, but not wet sponge.

The press-pack is shown in Fig 11,—it consists of an outer cover of card board, folded once in such a way that the edges are in harmony, otherwise displacements might occur, especially if the edges are uneven on the side which is fed to the rollers. Inside this folder are two or three layers of filter paper on both sides of the print and reprint paper. The size of the filter paper must be greater than that of the reprint paper. Neither the card board nor the filter paper should show the slightest trace of unevenness or fold, as this would show in the reprint.

As the first reprint is never good, it is made upon a poor grade of paper. The pigmented brom-oil-print or oil-print is carefully lifted with a

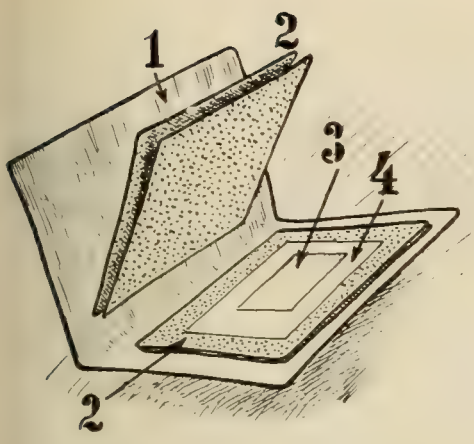

FIG. 11—THE PRESS-PACK FOR THE REPRINTING WITH PRESSES
1—Cover of strong cardboard
2—Filter paper
3 Oil print or brom-oil print
4—Reprint paper

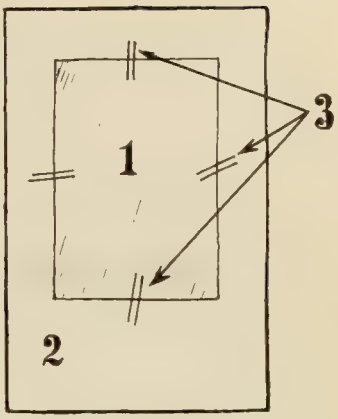

FIG. 12—THE MARKINGS FOR MULTIPLE REPRINTING
1—Oil or bromoil print
2—Reprint paper
3 Pencil lines for markings

knife from the glass plate, and placed, emulsion side downward, upon the paper and the pack closed.

The pack is passed carefully once through the rollers, without leaving them. Pressure is increased and the pack returned, pressure again increased and this repeated four or five times. After releasing the pressure the pack is passed entirely through and taken from the rollers. If all has been done right the oil-print can now be readily lifted from the reprint.

If the reprint paper is too fibrous, or too dry, the separation becomes difficult and often damages both layers.

The appearance of the first reprint is mostly a discouraging one. It lacks character or strength, for the oil-print or brom-oil print has been too slightly pigmented. Thus the first reprint appears always gray and dirty (Fig. 10c).

The second coloration is done after bathing or wiping the gelatine with wet cotton. This second coloring proceeds more rapidly and is simpler than the first one. For the second reprint the high grade paper may be used as the quality of the reprints will now become better with each transfer until the gelatine layer becomes exhausted. This will take place after ten to twenty reprints have been mad. Fig. 10c is a sample of the eleventh reprint.

The Combination or Multiple Reprint

The simple reprint has the disadvantage that the modulations and details of the shadows are uncontrollable, for the darker portions of the picture are either too gray (if the primary picture was too lightly colored) or too black and blotty (if colored too much).

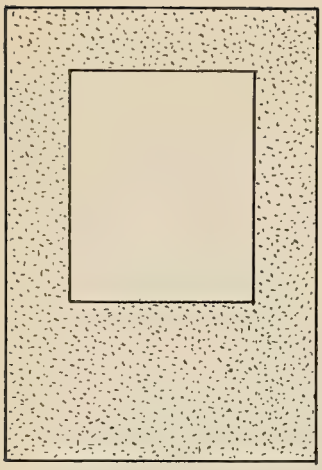

FIG. 14—THE SO-CALLED "VIENNA WINDOW"

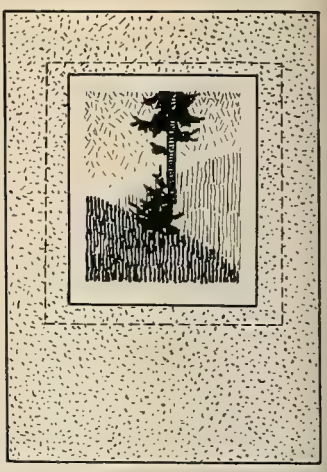

FIG. 15—Reprint and "Vienna Window" MOUNTED

This disadvantage, which causes many failures in certain subjects, can be overcome by the combination or multiple reprint, in which upon one and the same paper two or more reprints are transferred.

The usual way is to color again the oil- or brom-oil-print, either in part or as a whole, and transfer the same upon the reprint. The reprints can thus be built up of more than one superimposed layer of ink. Some technicians go so far as to use different prints for one and the same reprint. In such cases one print is used for the lighter portions, another for the shadows, a third one for the medium shades. This kind of work becomes, however, very complicated and is practically not often used, hence description is given only for the multiple transfer from one and the same oil-print or brom-oil-print on one reprint.

The main problem is to bring two or more transfers exactly one upon the other without distortion. This is done by marking reprint paper and oil-print paper with pencil lines (Fig. 11). There are two cases possible: One intent to make a simple reprint and finds that the reprint is weak or only partially good. In this case the print is again colored but only on those portions of the picture which require strengthening, and reprinted again. This second coloring must be done very slightly as the pigment is added to the first reprint and results in a stronger shade.

In the second case a multiple reprint was intended from the start, and then it is advantageous to consider in the first reprint only the lighter portions of the picture, leaving the shadows intentionally weak and gray, but work them gradually to the required strength.

An illustration of the building up of a multiple reprint is furnished by Fig. 12. A practical attempt and experience will readily show the principle of strengthening weak portions by additional overprints.

The retouch of reprints is not so easy as the retouch of the oil-prints or brom-oil-prints. To lighten portions, or remove color is best accomplished with a pen knife or ink eraser, but care should be taken not to damage the very delicate paper. White spots or increasing shadows or parts can be done by means of water colors. In very deep shadows the water color will not adhere, on account of the oily layer, especially if the prints are still fresh and the varnish has not entirely evaporated. In such cases it is advisable to let the print dry for some time and then moisten it with a moist sponge.

Reprints look their best if they are framed and have a wide edge, just as the etching have the "neutral field" around the picture proper. If the white paper around the picture is too small, or has become soiled, it is advisable to make use of the socalled "Vienna Window," consisting of a strong card board in which an angular space has been cut, slightly larger than the picture, and pasted upon the reprint. Fig. 13 and 14.

For further study the following literature is recommended:

1. Dr. F. Fuhrmann, Der Oeldruck.
2. Dr. E. Mayer, Das Bromoeldrucjverfahren und der Bromoeldruck.
3. E. Guttmann, Die Selbstbereitung der Bromoeldruckfarben.
4. E. Guttmann, Der Umdruck im Bromoeldruckverfahren.

and finally the enclyclopedic work, which is heartily recommended to serious artist photographers:

5. H. Kuehn, Technik der Lichtbildnerei.

All these works have been published by W. Knapp in Halle a Saale.

The writer will be pleased if these lines will encourage the friends of photography in beautiful California to further experimentation along these lines, he is conscious of the many possibilities and variations and has attempted to point out a simple and sure way to success.

(The End)

TRAY CLEANING—I have noticed from time to time in the various magazines devoted to our hobby, art, or means of livelihood, as the case may be, directions for all manner of solutions and what not, for the purpose of removing the incrustation which is the result of developer and tap water forming an attachment for our trays, etc. The basis of practically all of these preparations is hydrochloric acid. Now I ask you, how many of our honest-to-goodness Amateurs have hydrochloric acid among the ranks of neatly labeled (or more likely, unlabeled) bottles on yonder shelf? Not very many, I'll warrant. But they could all beg, borrow, or steal an ounce or two of vinegar somewhere. Pour it into the tray, grad., or bottle and let it soak for a while, mop with a bit of cloth or cotton (it won't bite your fingers), then rinse and wash thoroughly with soap and water—Presto! it is done!—Carl W. Beese, Fenwick, Ont., Canada.

A 12x16 foot enlargement used as window dressing, seen through "prop" doors and which was enlarged from original print 18 diameters, or 397 times larger

The "Shipman Process" Enlargements

By Joseph Shipman

With Illustrations by the Author

To the Editor.—In response to your request for another article on the further advancement made by this process in the five years that have intervened since my former article published in your magazine in January, 1918, I submit the following facts which will of themselves justify all and more than was claimed at that time. It might be well to add here that this article is written along general lines and does not attempt, nor is it intended, to cause a controversy with any who may have had an intensive training along any special line. It is only written with the desire to stir to greater effort those who may be benefited thereby.

At the time of writing my former article in your magazine, January, 1918, I only occupied four rooms on the second floor of a building that did not allow of making enlargements in excess of 40 x 120 inches, yet I then stated that perfect enlargements could be made up to 14 x 20 feet from an 8 x 10 inch negative; this and much more has since been accomplished

A 14x20 foot publicity enlargement of Jackie Coogan, showing little "Jackie" standing upon a box against the picture, also the camera man in the foreground

during the occupation of our present ground floor plant, as well as the accumulation of a much larger fund of knowledge and experience through our continued research along enlarging lines.

In our present plant, which occupies some 3500 square feet of floor space, we are equipped to turn out a 14 x 20 foot enlargement in two hours' time. This enlargement is exposed, developed, fixed and washed as one piece, and when mounted makes a perfectly matched enlargement that defies detection, except by the closest scrutiny. In addition to the regular commercial lines of enlarging as carried on by most photographers, we reproduce from **books, magazines,** and **photographs** of all kinds and descriptions hundreds upon hundreds of enlargements ranging in size from 6 x 8 feet to 14 x 20 feet, and in numerous cases we have enlarged (in sections) up to 40 feet, 60 feet, and as high as 200 feet in length.

The average time consumed in making a 14 x 20 enlargement, from exposure to mounted product, is about two hours, using two employees. This will give some slight idea of how we have succeeded in commercializing enlargements, regardless of size, and can supply the growing demand for enlarged photographs for outdoor advertising purposes, window displays, poster work, moving picture production, lobby fronts, and the hundred and one ideas demanded by the creators of new lines of publicity.

For this work we are rarely given an original negative, and when we do receive one it is generally on portrait or commercial film and of little use for our purpose, as film negatives do not carry the clear-cut qualities required for good enlarging purposes.

GRAIN—so called, is the bugbear of most all photographers, as they have grown up with the fact firmly established in their minds that there is a perceptible grain in all enlarged work, and that the greater the enlargement the larger and more distinctive becomes the grain, until, at times, it actually seems to prohibit the making of unusually large sizes. This is not so, as enlargements made under correct conditions, regardless of size, do not show any perceptible grain when viewed at anywhere near the correct viewpoint or perspective. This so-called grain is the common result of a grouping of inaccuracies in the enlarging equipment and knowledge, and not, as generally supposed, caused by the silver molecules in the emulsion of the better grade of plates. This is conclusively proven by the fact that our 20-foot enlargements from an 8 x 10 plate (enlarged 24 diameters) do not show any trace of grain. In our research work, some few years ago, we found that the nearer we came to Shipman Process projection principles, the less grain appeared, and that we were eventually able to eliminate this trouble entirely. I might state here that in enlarging from Graflex plates, moving picture negative and some few speed emulsions there is, when enlarged many diameters, a distinct grain discernible, and which is caused by either the coarse silver molecules of the emulsion, or in the case of film, the coarser particles that go to form the film base, or stock, but this condition does not apply to the portrait or commercial negatives in general use.

FOCUSING.—The proper focusing of an enlargement, regardless of size, is direct and definite if one can overcome the habit of feeling that he must get the image sharp. By this I mean there is a tendency to try and sharpen the image as a whole, or the eyes, hair, chin or several collective points, whereas we found that by discarding the image itself (once the size is correct) and selecting a tiny pin-hole or minute scratch, etc., and focusing for this one item alone to the exclusion of everything else, we get a quick, sure and sharp focus of the entire subject. This is of a particular value in determining sharpness where the negative, of itself, is not sharp, as the pin-hole or scratch brings you to the sharpest possible focus for this class of negative. Should the pin-hole, scratch, etc., that you are focusing on not give a clearly defined sharp edge, or line, and cannot be

May Allison autographing a huge enlargement of herself

nade to do so without showing diffusion, you may depend upon it that our equipment is badly out of alignment, and should receive your immediate attention. Some may take exception to my saying that they will find minute pin-hole, scratches, etc., in their negatives, but you will find that practically every negative contains these elements in a minor degree, and which are too small for spotting, yet will show up very clearly in any enlargement of many diameters; if they do not, it is simply another proof hat your equipment is not producing direct light rays, and that your picure contains more or less confusion instead of sharpness.

TESTING ONE'S EQUIPMENT.—For a practical proof of the correctness of your enlarging values, take an average good negative and nlarge some given portion of it five diameters. Make another enlargement of the same portion ten diameters and another fifteen diameters, llowing sufficient added time to get the best print possible out of each

enlargement. When these are fixed and washed, place them in a good light, and if you are getting the correct result your larger enlargements should show, in accordance with their increased size, improved strength, gradation, depth and general stereoscopic values, and be superior, on general principles, to the smaller enlargement. This test is based upon the fact that an enlargement made under correct principles and accurate equipment will increase in values and bring out greater detail as the larger sizes are attained, producing an amazingly beautiful reproduction from a 5 x 7 or 8 x 10 plate up to 20 or 30 diameters, and even larger. Should a different test be desired, and one that is easier for the photographer with the smaller equipment, it can be done by taking any good discarded negative and place several pin-point holes in various places through the emulsion and enlarge this negative up to eight or ten diameters and make your test. These holes should show up as clear and distinct and be as sharply outlined as they are in the plate, regardless of their position on the negative. If they do not do so, it is simply another proof that your equipment is not giving the results that you should expect.

A SUGGESTION.—I might say, for those making enlargements of any considerable size, always have your negative made on a glass plate where possible, and where you are forced to use a film negative that is brought to you which lacks enlarging values (and most of them do, for the larger sizes), it is better to make a good contact print and copy it upon a glass negative, than to turn out a poor enlargement to a customer whose expectations are based upon the snappy contact that he has received from the same film, as you cannot satisfactorily explain to him why he cannot get a good enlargement from a film that has apparently given him a good contact print.

It is astonishing the number of photographers who make their own copy negatives on **film** and bring them to us for good enlargements, whereas we could give them far better results if they used glass plates or allowed us to make our own negative. Copying negatives for enlarging purposes is distinctly different from making copies for contact purposes. It must be remembered that there are some eight or ten grades of contact papers, while there are only two grades of enlarging papers. It is possible to get a good print from a poor negative by contact, but it is not possible to get a good enlargement from a poor negative under any circumstances. Negatives for good enlarging must be clear and brilliant, with full detail and gradation throughout, whether an original negative or a copy.

SPECIALIZING is the surest and quickest road to solid business standing and success, and those who take up the study of any single line of work in photography, and become expert in that line, will eventually reap a far greater reward than the great mass of photographers who claim to do everything and do it well; this is not possible, and is not favored by the public, upon whom we depend for our success. The day of specializing has long since arrived, and we have only to look around us, particularly

PUBLIC LIBRARY

Shipman Process delivery truck, showing one of our own methods of advertising our process. Note the enlargements with the contact prints attached to each. The figure on the left is Joseph Shipman

among other professions, to find many who have climbed to the pinnacle of success by doing one thing, and doing it well, and there is no satisfactory reason why a photographer should spend the best years of his life and energy trying to learn all branches of photography, when he could take a short cut to a single line of work and master it thoroughly, becoming an expert in his chosen field.

I might here add that I will assist, in what small measure I am able, photographers who are having trouble in enlarging and who are willing to give intensive thought and training to their own betterment along this line. Any letters addressed to me care of Camera Craft will be answered (to the best of my ability and protection to our own process) through another article published in this valuable magazine, and by the kindly permission of the editor, in the near future.

The need in this country today is not so much for a real job for every man as for a real man for every job.—The Optimist.

Some Adventurings in Photography

A Series by Sigismund Blumann

I.—Enlarging Papers

Prologue

After twenty years of varied experience in photography, as various as only the amateur can afford to his indulgence, I had still a half-contempt and half-fear of enlarging. Of the actual doing I knew nothing. Lanterns and condensers, reflectors, and diffusion were theories and mysteries, and therein lay my fear. Such enlargements as I saw were in the main rather monotonous as to technique. All had a bromide look, and about three surfaces and two tints were in evidence: Matte, that semi-sheen known as velvet, and a glossy rough. These might be on white or buff stock. The actual prints ranged from sharp to smudge-fuzzy. Something of the life and snap of contact prints was lacking in them all. Presently, as my circle of photographers became larger and more intimate, I learned of waxing and toning, but no charm allured for all that.

True, now and then a Porterfield masterpiece woke me to enthusiasm, but it was not the print but the artistry and the ink that covered the silver that furnished the attraction. Within the past five years a new vista opened before me. Kales, Doolittle, Anderson, Goetz, Edwards, White, and a host of artists hung pictures, real pictures with all the elements and essentials of true art and their medium was enlarging paper. There was a new variety, an individuality that either my former ignorance had caused me to overlook or it might be I had not been able to see because non-existent. New surfaces, textures, nuances of shading and tones of color, transparent shadows, luminous lights. Some told me it was the magic of lenses —of the Verito, the Smith, the Portland, but it looked more like newer possibilities due to more varieties and higher excellence in papers.

So I bought an enlarging apparatus that looks like a small locomotive and has condensers that weigh as much as a fair-sized child, and determined to learn something of this enlarging. Bringing a practical mind and an analytic one, if not an especially artistic, to the investigation, I may claim to have something to say on this subject, and so, praying to the proper muse of prose to be good to me, I proceed to say it. Bromide, Chloride Papers, Anastigmat and Diffused Focus Lenses shall be the subjects. I shall speak of them by name, boldly, making no invidious comparisons, but giving each honest and sincere treatment.

After providing myself through the courtesy of the manufacturers with every grade of every variety of enlarging paper available to me, and after experimenting with each carefully according to the maker's directions, the conclusion has been final and determined that neither the amateur nor the professional has availed himself of a decimal part of the possibilities at hand. We have been told to specialize in one brand of paper and in one grade of that paper in order to attain perfection. Piffle! Carried

to its ultimate, that might mean to keep on printing from one negative all one's life. The artist dares to adventure. He explores the remotest fields to stimulate his fancy, he tries the strangest things to help convey his emotions.

If there be art in painting and painters have been justified in using all sorts of canvases, surfaces, pigments, brushes, even various-shaped pallette knives and infinitely various-shaped thumbs, then if there be art in photography—and I believe there is—then every different developer, every different make and surface and grade of paper has its own spirit to imbue or to help the photographer to imbue into his pictures. Professional portraitists might increase their profit the while they better their work by taking advantage of all this. Just what is meant by these words can be crystallized into a sentence—Eastman papers are perfect, Gevaert papers are perfect, Haloid, Cyco, and Wellington papers are perfect; yet what the Eastman paper has to bring to us is different from the others; what the Gevaert papers show is distinctive; Haloid has its own inflections; Cyco is in a class by itself. The English papers are not like the Swiss and neither is like the American. It was astounding to find the Gevaert people had thought it important enough to put over fifty varieties of their enlarging product on this market, so far from their factories; that Eastman has an equal number and variety; and that with all these the other makers expect to find a market, too, for their own individual papers—a paper, mark you, not only for every use, but for every shade of use and idiosyncrasy. These brave producers of the material from which our photographers are working out their greatness are striving to remove the restrictions and limitations of photography. They are creating opportunities, and it is for us to make them useful to our own advantage.

So, with the patience of the reader (and I would claim, here and now, the right to discontinue the series without further explanation if my poor efforts fail to arouse interest or the Editor orders me out), I hope to deal with definite subjects, called by their proper names.

Gevaert Enlarging Papers

Due to the courtesy of the American office of the firm, I was supplied with experimental sheets of every grade and surface of the three brands of Gevaert enlarging papers, Nova Brom, Ortho Brom, and Vittex. The latter is sufficiently slow for a gaslight D. O. P. The number of these grades astounded me, for, not only were there Glossy, Semi-Glossy or Sheen, Semi-matte, Matte, Smooth-matte, Rough-matte, and Rough Lustre, but the line was duplicated in white and buff and quadruplicated in many cases by Soft, Normal, Contrasty or Hard, and further multiplied by single and double weight. This will impress the reader more forcibly when the fact is noted that the Gevaert establishment is in Belgium and that they feel it of sufficient importance to photographers in this country to export such a variety. It is at least a brave bid for our consideration.

We Americans are in many ways a radical people, but in the use of photographic materials we are very conservative. There are more makes of plates and papers in England than in this land of ours, and yet the Britishers are buying French, Belgian, German, and American products for the varieties offered, the different effects producible and the pleasure of change. Truly enough, our domestic manufacturers are giving a wonderful line of goods. Nothing can excel the Eastman Bromides, the Artura, the Cyco Enlarging, and the Haloid lines, but there are European papers that can equal these and differ. It is not just duplication but change—sometimes of texture and surface, sometimes of tone, and sometimes in manipulation.

The Gevaert papers at the very start impressed me with an outstanding peculiarity, all to their credit. The emulsions are firmer than any I ever experimented upon. Even the glossy did not stick though fixed without hardeners of any sort, and though dried between muslin under slight pressure. When bone dry they did not have a tendency to crack, which is saying a great deal when told of the matte emulsions.

Allowing for the possibility of my samples being especially fresh, I had a friend buy some of these papers in the open market, and feel safe in saying that what is written here holds true of Gevaert in toto. So we may proceed from the comprehensive to the specific and deal with each surface and brand.

There are three distinct brands—Nova Brom, Ortho Brom, and Vittex. These are all enlarging papers, though the last named is slow enough for contact printing. Nova Brom is a bromide paper, somewhat cheaper in price and twice as fast as Ortho Brom. Ortho Brom is coated on heavier, denser stock, and due to its slower emulsion, produces finer gradations and better tones, though I must confess that the same negative in the same developer showed only the slightest difference. There is a finer grain to the slower emulsion, of course, and that must produce a better scale of gradation.

Vittex is a chloride paper three times slower than Nova Brom and one and a half slower than Ortho Brom. Its characteristics are similar to those of Artura and Cyco, and I am not prepared to say its individuality warrants my taking space for expounding. Suffice that like the entire Gevaert line it is good.

The glossy surfaces should appeal to our commercial workers, for a harder yet equally pliable coating cannot be conceived. It is quite remarkable. And the blacks were nearly perfect and easily obtained with the usual M. Q. developer.

As one who is pictorially inclined, the rough surfaces appealed to me most, and I fear the beautiful porcelainy face of the mattes and the sheer of the semi-mattes will not get their due here. Of the rough coating I can say that the too frequent loss of evenness, the patchiness and pock-marks from which we have suffered at times are not present in these

papers. The roughness is apparent rather than actual. The rough mattes and semi-mattes or sheen are quite unapproachable.

Taken from the portraitist's point of view, it seems possible that Gevaert will make bromide as popular as chloride in the studio. There is a "feel" to every surface that makes them attractive and saleable. Taken all in all, it may be said that for latitude, general ease of manipulation, and finish, Gevaert has given us something very worth while. As to how evenly they may run in quality, the merit of the service and the willing courtesy to make good complaints—that is up to the agency. With the responsibility of marketing so complete and extensive a stock, it would seem impossible for anything less than the best treatment and utmost integrity to be even considered.

In the next issue we shall deal with Cyco enlarging papers.

"CHRIST IN THE TEMPLE." Photo by J. W. Beattie

A scene from the Pilgrimage Play which has been presented every summer in the hills near Hollywood. The lighting effects used in the play are a combination of incandescent floods and colored spots, and while very beautiful visually are practically non-photographic. For this reason, the play has never before been photographed except by daylight.

One Hollywood Flood-Lite was used in conjunction with a Beattie Hi-Lite. Exposures were snap-shotted with an ordinary shutter, Verito 11½ inch, diaphragmed to F:11

"TILLIE"

Home Portraits

By Frank Reeves
Stamford, Texas.

With Illustrations by the Author

Most everyone acquires their first camera without any special thought of making any particular class of pictures—they just want to make pictures. If they survive the usual run of beginners' failures, they perhaps find themselves selecting some particular class of pictures as the most interesting to them. There is, however, one class that I think gets a trial from all who take up picture making, and that is, Home Portraits. Perhaps more fail on it than on any other class of work. I think at some period in every amateur's experience they have had a desire to make Home

THE PLASTICITY OF FLESH EXCELLENTLY SHOWN

Portraits, perhaps not beyond their immediate family or their intimate friends, but the desire has existed. It may be that it has never grown strong enough to do more than make itself felt, or it may be that its growth has been stunted by an attempt that produced everything that was not desired. Defects that were minor in reality were emphasized by improper lighting, or it may have been very flat or the soot or whitewash effect. There are innumerable pitfalls, anyone of which are often enough to make the results anything but pleasing.

Amateur photographers as a whole are perhaps the most persistent lot of people that you can find. They aim high, but few attain their aim, so in the main they must live on hope. My experience was no exception; I wanted to be able to make at least presentable pictures of my friends, but my attempts were very discouraging, both to myself as a photographer and to my subjects who were willing to have a likeness made of themselves. In order to have any friends at all left, I was obliged to swear off trying to make portraits. The germ, however, did not die, nor

was it exactly dormant, but I was able to hold it down to reading all I could find about making Home Portraits. In the mean time I was getting along pretty well with views and action pictures, but occasionally some friend would suggest that I make a picture of perhaps their child, as they knew it would be good, because I made good views. While this would always start new emotions, I would always remember my past experience and declined to try.

Theory as to making pictures is like theory in every other line of work, a good thing to have to combine with actual experience. Experience will sometimes shake the very foundation of your theoretical structure and almost make you skeptical. Her methods are sometimes harsh and painful, but if you expect to succeed, you must have experience. There are a number of text books and leaflets on Home Portrait work, and they are good. In the hands of an expert, or someone sufficiently versed in the work to know how to follow instructions, they will produce splendid results. But to the average amateur there are so many apparently trivial instructions, he disregards some of them to the detriment of his finished result. In making Home Portraits there are so many make-shifts used, that there is always a temptation to overlook something, and then there is an incentive for one to make excuses for failure where make-shifts are used. I think they are perhaps responsible for more failures than most anything else. Not necessarily the fault of the make-shift, but the human element enters into the equation with the natural inclination to shift responsibility. Regardless of how inefficient our equipment may be, we rarely get all we could out of it.

I was pretty well discouraged on portrait work. I think it was in the April and May issues of Camera Craft in 1921, Mr. Felloes had two articles on Home Portraits. One of them pertained to pictures made indoors and the other outdoors. Outdoor portraits are perhaps a part of Home Portraits, but I believe they should be made a separate class. Perhaps the beginner will get better results from outdoor portraits—that is, his chance pictures will occur more frequently, but on the whole I think outdoor portraits are really more difficult. I will not attempt to discuss that branch in this article—it deserves separate treatment. I am going to urge you if you have those issues of Camera Craft, to look them up and read these two articles. Not only did I read them over one time, but I read them several, and one day I mustered up enough courage to make another attempt at Home Portraits.

Now, the object of this article is not to pose as an authority, or to tell anyone just how it can be done, but rather to stimulate and restore confidence in fellow workers. So if I am able to give some fellow worker a little encouragement and point out the dim light of hope that may appear to have wavered and gone out, then I shall be very thankful for the space this article occupies.

Now for a few words as to how the pictures were made. I am not going to attempt to give the exact method, but rather from a general

ARRESTED MOTION ALWAYS ADDS INTEREST

standpoint, because Home Portraits are made under the widest range of conditions. They can't be standardized as in studio work, so experience, and experience alone can give you a line on exposure and light values. Light values are very deceptive and have a tendency for flatness as one extreme and harshness as the other, and fortunate indeed is the photographer who is able to hit the happy medium.

These pictures were all made with a B. & L. IC Tessar Lens, eight and one-half inch focus with stop F:4.5 on Eastman Portrait Films. The light was from a double window that faced East, but quite a bit of the light was cut out from the windows on account of porch roof that covered that side of the house. This light was supplemented by two Day-Light Blue globes, 200 Watts each, in separate reflectors. In some of the pictures one light was used on the side of the sitter to increase the light and the other used to break up shadows instead of using a reflector. In others

BRILLIANT LIGHTING IS STILL ATTRACTIVE

the light was held near the camera. The exposures ranged from one and a half seconds to three seconds. The films were developed in a tray with Pyro developer. I would have preferred tank development had I been equipped for tank development for films.

You can read volumes on proper lighting and exposure, but until you experiment some yourself, you will be at sea. Study the effect of the changing of the lights and reflectors, both by looking at it on the face of your subject and as it appears on the groundglass. Make an estimate as to what the exposure should be and make the exposure and develop your plate or film. Make a mental memorandum of the appearance of the light and its intensity, and then with your negative to work from, you have some basis to work on for future trials. Subsequent trials should show an improvement. If you can make another trial as soon as you have developed your exposure using the same subject and the same general plan, so much the better.

HOW THE PACKARD MOTOR CAR COMPANY USED THE CAMERA TO VISUALIZE THE "DESIRE" IDEA

The Legerdemain of the Advertising Camera

By a Commercial Art Manager

Courtesy of "Printers' Ink," New York

Very often, in order to illumine a selling argument or properly to visualize a unique headline, photographs must resort to methods that seem mysterious.

Those unacquainted with how it is done are very much mystified, although it is no more mysterious or inexplicable than the hazardous "stunts" of the motion-picture business.

Camera experts have perfected the double-exposure idea to the point where very grotesque blends of two contrary elements are accomplished. In other words, two exposures, made at different times, are put on a single negative. Some very famous "ghost" pictures, photographically perfect, have been produced in this fashion.

It is merely a matter of understanding photography and of mapping out operations in advance. We have all seen the astounding composite pictures, where a portrait, say symbolic of the musical profession, is made up of impressions of thirty or more faces, one melting into the other, finally to form a baffling, haunting whole? The camera is fixed in its position and a number of separate exposures made, one on top of the other, under similar lighting conditions. Or the same thing can be done from individual photographs, the artist not working from live models at all.

But a much more common practice is that of cutting and fitting negatives or making a mosaic of actual prints, and so carefully and perfectly pasting them together that when a new photograph is made or when a half-tone is ordered direct from the original, the patching does not show. No special skill is required to accomplish this.

Here is a case in point: an advertiser wishes to bring out the thought that people who live away from proximity to good roads, virtually "live in a desert." The specifications called for a modern cottage set in the midst of a vast and bleak expanse of sand, far from civilization. Now no photographer could find such a picture in reality. It is easy, on the other hand, to find photographs of deserts and of cottages, separate and apart.

A UNION OF PHOTOGRAPHS

An artist first mounted an enlarged photo print of a desert scene on cardboard, allowed it to dry perfectly, and then, after silhouetting a pretty little bungalow, mounted it in turn, in position, on the desert picture, being first careful to see that the perspective of the house was in complete sympathy with the perspective of sands and far horizon. Now photographs have a certain degree of thickness. The super-imposed print would have "thrown a shadow" because of these outer edges, as cut with a pair of scissors or, better still, a very sharp knife, had they not been "bevelled down" by means of rubbing over with very fine sandpaper. A good knife can also be used. When this is done the edges disappear, although a certain amount of retouching is necessary.

Care must be taken not to allow any of the glue or paste to remain on the surface of the print in its superimposed shape, for these shiny surfaces are apt to show up when the engraver makes his negative. Rubber cement is preferred by experts, because, after drying, it can be quickly and thoroughly cleared away with a chunk of its own kind. Rubber cement holds prints firmly in place. If an error is made a little benzine flooded over the surface permits one to lift the print up again. With paste or glue the under surface would be ruined. When mounting photographic combinations be sure there are no lumps on the mounting side, for the smallest foreign particle will mar the surface.

When the engraving was made of the desert scene, so far as the average reader was concerned some photographer had actually found a lone bungalow out on the sandy wastes and snapped it. There was the conclusive evidence of the camera detail.

It seems not to occur to advertisers that they have in their own files of photographs the raw material for many remarkable and original compositions, and that magic need not be employed to create them. A pair of scissors and a paste pot can accomplish marvels very often.

Perspective and its hard and fast rules is the one stumbling block. There should not be a clash in this respect. If absolute realism is desired, perspectives should match.

It came to an advertiser in business papers some time ago that his illustrations were becoming very commonplace and monotonous. They consisted of rather prosaic views of mining apparatus from negatives sent in by field salesmen. But as there were hundreds of other similar photographic illustrations, the campaign was not of a character to claim any individuality.

"Why not give your next campaign a character of its own by minimizing the background detail and enlarging upon your machinery?" an artist inquired, who was brought into conference.

"Don't quite get you," replied the head of the sales department.

"Show accessories and mining atmosphere in miniature," was the response, "and display the machines in detail, in giant size, all photographically, for realism, because I do not think your class of readers will appreciate original drawings. They want camera proof."

"Go to it," acceded the sales manager. "It isn't clear in my mind yet, but I'm willing to be shown."

The artist proceeded to make good with his suggestion. In the company files he came across any number of excellent long-distance views of mining properties, some of them covering a mile or more of land, with mountain ranges, shafts, work-houses and rivers.

From old catalogues photographs, near-on views of mining machinery were secured, silhouetted neatly and mounted upon the vista prints, one to each panoramic view. The effect was startling, for at once the mechanisms loomed mountain high, by contrast, rising impressively above huts, shaft-houses and mountains, until they touched the sky.

With an air-brush, first studying the lights, the artist then blew in partially transparent shadows at the base of each machine, where it came in contact with the ground. The patching was not visible after plate-making, and the campaign was the hit of the season. Competitors were somewhat at a loss to know how the strange illustrations had been created. Such photographs amaze and mystify many persons.

Incomplete photographs can be made complete by superimposing other parts, as when a manufacturer of bathroom fixtures wished to introduce life into a series of catalogue illustrations. Two dozen very fine exposures had been made of completely furnished bathrooms of an ultra-modern type. No one had thought, at that time, however, to introduce figures. And time did not permit of taking them all over again, as the temporary fixtures had been dismantled.

Here is how the series was successfully realized, despite the handicap, and in a space of two days. Tracings were made of the interiors and on these tracings a figure artist roughly sketched in figures of maids, housewives, children. This was a provision for establishing both pose and size.

Models to fit the scenes were sent for and posed in exact accordance with the poses on the tracings, the photographer regulating their sizes by the same chart. The prints were silhouetted and mounted into the

individual rooms. Retouched, the proofs for final showing gave no indication of the photographic "trick" that had been played, and the catalogue was enlivened by just that much.

Sometimes the dovetailing is very intricate. In the case of another catalogue it was necessary to show a sectional view of different houses, as if a side had been cut away, bringing to view the various rooms and their furnishing. A photographer first made exterior pictures of a number of handsome residences. The line of vision was at a slight elevation. Then separate interiors were taken of rooms, from the doorways, to secure as wide a range as possible. By patching, cutting and trimming, the room prints were superimposed over the views of the houses and arranged to conform to different locations and floors. In the meanwhile, the outlines, roofs, foundations and backgrounds of the first series of pictures were left intact. A most interesting type of cut-away picture was produced and in a manner that baffled those who did not know how it was done.

COMPARISON ILLUSTRATIONS

It is always possible to secure comparison illustrations, where one unit is entirely out of proportion to the other. A man, apparently fifty feet high, can be made to walk along the street of a village, the roofs of the houses barely reaching to his knees.

A "city of factories" is always interesting and inexplicable to the uninitiated. Thus, if an organization is made up of thirty factories, situated in different parts of the country, and it is desired to show them in group formation, as a community of plants, all in a single area, the photographic-artist is in a position to wave his wand and say, "very well."

But he himself must go to the various plants and make his own pictures of each, for here again the element of perspective enters. There must be some common basis of vision to hold them on the same plane. Otherwise the composition would be askew, unnatural, ridiculous. But once an expert has secured sympathetic perspective prints, it is fairly easy to group them, after silhouetting, and mount them into a clever appearance of a city of factories.

A factory can be set down in the heart of a business street; it can be put in the heart of a deep wood; it can appear on a mountain peak, or it may be swept over a high waterfall, in order to give emphasis to selling arguments.

All of this may be done with patched photographs.

Failure often is the vestibule of success, but don't loiter in the vestibule.—H. & B. Drummer.

Accept the challenge of hardships. Soft jobs make soft men.—Door-Ways.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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On Being Different

Yosemite—this earthly paradise, inspiration for all and a lasting temptation to the photographer—once more garbed in beauty, again invites you.

"HALF-DOME," SUNRISE
By Irene Watry

You will take your cameras, of course, and between you all a few miles of films, some ray filters, and the ambitious will not forget a lens of long focus, remembering how small the majestic mountains and crags and waterfalls showed on their negatives of a previous visit. This year there has been better provision made, no doubt, and this year all will go determined to show their friends "what's what!"

We have recently received from a photographer located in this beautiful valley a neatly printed card, stating the best hours of the day to photograph certain points of especial interest. At the time mentioned the light is supposed to be just right, and you are expected at that point at that hour; that is if you care. You go there, you press the button, "we do the rest," and your photograph will be as like to a million others as peas are like in a pod. Now, this is fine advice if you long to be one of a million; but there are some—Heaven bless them!—who would rather be a little ahead or a little behind that million. We choose either place just out of cussedness. But we notice Miss Irene Watry (the maker of the picture here engraved) prefers to be ahead of time; she is an "early-bird." Her picture of "Half-Dome," which according to the timetable should have been made from 10-11:30, was shot

at 7 o'clock in the morning, and behold! not so bad for one who would deliberately break rules; and the camera didn't explode either.

Dear Brothers and Sisters, when you are advised to become one of a million, in photographic practice at least, just rise on your hind legs, paw the air, and snort, or adopt some other picturesque way of showing disapproval; then join the happy band of irregulars. You may have failures but you will have fun; you will be different. And when you succeed, your friends will throw their arms about you and call you blessed, because—you are different.—E. F.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Fireproofing Fabrics

The report was published some little time ago of a committee appointed by the municipality of Paris to recommend a simple process for the fireproofing of fabrics, draperies, etc., used in the making of theatrical scenery and in photographic studios. According to the report, the following mixture has been found to answer excellently for fireproofing fabrics and in the production of painted backgrounds: Borax, 6 parts; boric acid, 5 parts. For fireproofing plain fabrics, curtains, etc., a solution is made by dissolving 6 parts of borax and 5 parts of boric acid in 100 parts of water. The fabric is soaked in this solution, and then simply hung up to drain and dry. It is found that the mixture, when used in this manner, does not rot or stiffen the fabric. As a measure of the degree of impregnation with the fireproofing chemicals, the committee prescribe the absorption of the mixture in the proportion of 44 gms. per square meter, so that the process can be checked by weighing a measured area of the fabric before and after soaking, each weighing, of course, being done after the fabric has been perfectly dried.

For the painting of backgrounds, it is recommended that the mixture of borax and boric acid should be dissolved in the size used as the medium for pigment or other colors. It has been found that the fireproofing chemicals do not interfere in any way with the very great majority of the colors used in painting backgrounds or scenery; in fact, they have been found to affect only two colors, one a brilliant red containing an eosine base and the other a strong blue lake. So far as the painting of backgrounds in the more neutral colors, which are generally used, is concerned, it may be taken that the addition of the boric acid and the borax to the size will not affect the employment of the usual pigments.—B. J. of Photography.

Development in Relation to Contrast in the Subject

The thought must often arise in the minds of the older generation of photographers that the spread of the modern practice of developing with a standard strength of developer in dish or tank has tended to overshadow the advantages which follow from a certain degree of adjustment of the developer to the character of the subject. We shall never return, we hope, to the days when "tinkering" with the developer had become a kind of art. On the other hand, I am quite sure that we are losing a good deal as regards quality of negatives by the rigid adherence to a particular strength of formula of developer for every kind of subject. These considerations apply particularly to subject

which include a wide range of intensities of light, that is to say, subjects which tax the admittedly wonderful latitude of the modern dry plate, or even exceed it. With such subjects as I have in mind—and they occur in various branches of photography—the simple fact is that if enough exposure is given for proper rendering of detail in shadows, the parts of the subject representing the highest lights are considerably over-exposed, and yield excessive density in these parts of the negative, with corresponding lack of tone in the prints or enlargements.

Providing that the exposure is full, that is sufficient for the shadow detail, a much improved quality of negative is readily obtainable by comparatively simple means of controlling the production of this excessive density in the high lights. One such means is simply the use of a weaker developer, i.e., the ordinary formula with addition of water. Another is some modification in the proportion of the developer proper to the alkali or accelerator solution. A third is the method of beginning development in the ordinary, or a somewhat diluted, solution, and after a very short time (not much longer than is necessary to bring up the image), transferring to a dish of plain water in which development is allowed to proceed slowly, and which may, or may not, require supplementing by a return to the developer used first for the sake of the requisite degree of vigor.

Perhaps I can best bring the advantages of these methods before the reader by first attempting what must be quite a rough classification of the kinds of subjects for which they are suited, and then we can turn to the practical ways in which the pyro-soda developer can be employed in dealing with them.

Subjects of Contrast

Although very likely many people are not aware of it, the average outdoor view, and particularly if it is a fairly open landscape, exhibits a relatively small range of contrast. I think Hurter and Driffield, Dr. Mees and others have published measurements showing that the highest light, usually the sky, in such subbjects is only 30 to 40 times the intensity of the light reflected from the darkest shadows. There is, therefore, not much difficulty, even if exposure is not as correct as it might be, of making a negative which is a correct rendering of the subject. On the other hand, the average studio portrait includes a greater range of light-intensities; still greater if it includes white draperies; and much greater still if one is using lighting of the shadow or Rembrandt kind, producing strong high-lights and, at the same time, increasing the depth of the shadows. Lastly, we come to subjects such as architectural interiors, in which the illumination of windows is probably many hundreds of times that of many parts of the building included in the photograph.

In all these cases the problem is the same, namely, to obtain detail in the shadows and yet to prevent the density of the high-light portions from blocking up to such a degree that difference of tones in these parts is lost. Hence we get toneless areas of drapery, which should be represented by delicate gradations, lack of detail in the windows of prints from negatives of architectural interiors, and similar defects which are as familiar to photographers as anything can be.

For my present purpose I may usefully take the average studio portrait as representing the first stage along the scale of contrast; the strongly-lighted draped bust as a further stage; and the architectural interior as the extreme of contrast which is likely to be encountered in ordinary work. While, as I have said, one cannot arbitrarily distinguish between these classes and prescribe one particular method of development for one and another for another, yet a fair idea of the advantages of the system will be obtained if the reader will keep these three divisions in his mind and think of them when putting into practice those modifications of the developer which I must now try to describe in as definite a way as I can.

The Developing Solutions

For this work there is nothing better than the old stand-by, pyro-soda. For one thing, the chemicals can be most readily made up into concentrated solutions, so that the proportions of the pyro and the

carbonate can be altered within the limits of almost any degree of dilution or concentration. I give the following formulae for the three stock solutions of pyro, carbonate and bromide. They differ from those which figure in most of the makers' instructions chiefly in the fact that they are made up with much less water than is usually recommended:

A.	Pyro	1 oz.
	Soda sulphite, cryst.	4 ozs.
	Potass. metabisulphite	60 grs.
	Water to	10 ozs.
B.	Soda sulphite, cryst.	4 ozs.
	Soda carbonate, cryst.	4 ozs.
	Water to	20 ozs.
C.	Potass. bromide	1 oz.
	Water to	10 ozs.

An average working developer, such as one would use for ordinary outdoor subjects, is made as follows:

Pyro solution A	2 drs.
Carbonate solution B	4 drs.
Bromide solution C	4 minims
Water	4 ozs.

At the ordinary temperature of about 60 deg. F. this developer will give a negative of the average degree of contrast in from three to four minutes. There is nothing special about it; it is the average pyro soda working developer.

Developing Studio Portraits

In dealing with subjects of contrast, such as that of the average portrait in the studio, there is much to be gained, as regards tone rendering in the high-lights of the subject, by modifying the above working developer in two ways, both of the simplest kind. The first is simply the addition of 50 per cent more water in diluting the stock solutions A and B. The second is in adding the bromide C solution exactly in proportion to the bulk of the working developer. A satisfactory proportion is 1 minim of the bromide 10 per cent per ounce of the working developer. Thus, with these two alterations, the formula for the working developer stands:

Pyro solution A	2 drs.
Carbonate solution B	4 drs.
Bromide solution C	6 minims
Water	6 ozs.

Development is naturally a little slower in this weaker solution, but at the average temperature of 60 deg. F. a time of development of 4 to 5 minutes will yield a negative of good gradation in the high-lights for the purposes of printing or enlarging on development papers. If printing is to be done on one or other of the daylight processes, P. O. P., carbon, or platinum, a little more time may be given without harm for the sake of the somewhat greater vigor in the contrasts of the negative, which is necessary for these processes.

Another Method for Portraits of Extra Contrast

While the developer recommended above serves quite satisfactorily for subjects of the moderate contrast which I have tried to define, portraits which are taken under strong lighting or, from their essential character, exhibit a wider range of tones, are much better dealt with by a very simple modification of the ordinary procedure, which we may call the "water bath" method. The plate is first placed in the working developer of the ordinary strength, namely, that given above for outdoor subjects. It is carefully watched for the first sign of the image. As soon as it is seen that the outlines of the image are plainly visible and that development to a low grey density is taking place in the high-light portions of the subjects, the plate is at once removed from the developer to a dish of plain water. The time in the ordinary developer will vary with different brands of emulsion, but with none will it probably exceed half a minute. As soon as the plate is in the water bath, the dish is rocked for a few moments, simply to remove developer clinging to the emulsion film, is covered with a piece of card and left to itself for, say, five minutes. At the end of this time, on taking a look at the negative, it will generally be found that all the detail in both high-lights and shadows has come up in a very satisfactory manner, without—and this is the important point—the density of the high-lights being excessive. With some plates five minutes in the water bath may be long enough for securing printing density, but if this is not the case, the only thing which requires to be done is to re-

urn the plate to the first developer and eep it there for from ½ to 1 minute acording to the degree of vigor required. On the other hand, if detail is still lacking n the negative at the end of five minutes n the water bath a longer time may be iven in the latter.

The principle of this method is very imple. During the short immersion in he first developer the film becomes saturted throughout its substance with the vorking solution. In the water bath only o much developer is in contact with the mulsion; not enough to produce the exessive deposit in the high-lights, yet still ufficient for continuing the development f detail in the shadow portions.

Development of Interior Subjects

When we come to the violent extremes f contrast presented by architectural interiors, views of ordinary rooms which nclude windows, and similar difficult subects, the change which with great advanage may be made in the working developer is the increase of the pyro solution nd decrease of the carbonate, the bronide being maintained at the proportion lready recommended of 1 minim C solution per ounce of working developer. A ormula for a working developer on these nes is:

Pyro solution A	4 drs.
Carbonate solution B	1 dr.
Bromide solution C	6 minims
Water	6 ozs.

his developer is weak in two respects: he proportion of carbonate is greatly reuced, and the additional water, in comarison with the ordinary formula, mounts to 50 per cent. Hence developent takes place very slowly. I should ay that 20 minutes at 60 deg. F. is about n average time. But in a long experince of this particular way of using the yro-soda developer I am convinced that ie additional time spent on development fully repaid in the wonderful degree gradation in the high-lights, coupled ith fullness of detail in the shadows. oreover, I am inclined to think that by developing in this way halation is avoided to a very marked degree. The slow action of the developer may have something to do with this, and so also may the very fine grain of the silver deposit, which is quite characteristic of this slowness of development. Those who may be interested in making a trial of the process will, I am sure, soon discover that it has very positive advantages in dealing with these difficult subjects. I don't pretend to understand why this should be so, but I know there is something distinctive in this process of development, for the gelatine film, after drying, has a somewhat polished appearance, quite different from that of negatives which have been quickly developed in the ordinary way or more slowly by an ordinary but diluted developer in a tank.—Graham M. Nicol, in The British Journal of Photography.

Stripping Negatives

At a recent meeting of the Antwerp section of the Belgian Photographic Association a lecture was delivered by M. Van de Leemput, who during the war was attached to the London General Post Office as official photographer in charge of a special service for rapid distribution of information to the Allied Armies. In the course of this work, documents taken from the enemy, which were thought to have any military value, were at once photographed and reproduced in large numbers. In order to make use of rotary presses for the printing, the negatives were stripped, and for this process M. Van de Leemput found the following formula to work very satisfactorily:

Potass carbonate, strong solution	60 c.c.s
Glycerine	30 c.c.s.
Formaline	30 c.c.s.
Water	1,000 c.c.s.

The negative was soaked in this mixture for half an hour and then dried without washing. The film was then readily detachable from the glass, and was transferred to the transparent flexible band used in the printing.—B.J. of Photography.

The true value of any service lies in its ability to do a thing **completely.**—aith.

For the Professional

In the Interest of Commercial and Portrait Photographers

Monthly Dinner and Meeting of Members of the PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA

Held at Hotel Stewart, Commencing at 6:30 p. m. on Monday, May 14th, 1923

At the conclusion of the dinner, President F. A. Webster called upon Mr. Lothers of Lothers and Young, to introduce the speaker of the evening.

Mr. Lothers: Mr. Chairman, Fellow-members and Guests: It gives me great pleasure to call upon Mr. MacMahon to speak to you on the "Psychology of Selling." I do not know of anyone better qualified to speak on this subject than Mr. MacMahon, because he has made a life study of the mental processes in connection with selling. Mr. MacMahon is known among his business associates as a "super-salesman," and I am quite sure that before he has concluded his talk this evening you will agree with them. He is holder of the world's record Challenge Cup won in 1915, and has been associated for twenty-seven years with the National Cash Register Company of Dayton, Ohio, and is now their San Francisco representative. As it is well known that a knowledge of salesmanship is one of the great needs in the photographic business, I am sure that everyone here this evening will get some points that are applicable to their own business. It is with extreme pleasure that I present Mr. MacMahon.

Mr. MacMahon: Mr. President, Ladies and Gentlemen: I believe it has been said that a compliment is a truth couched in the best form. If that is so, I sincerely hope that I will be able to live up to the introduction that you have just heard.

It is hardly possible to conceive of a doctor or a lawyer who in his chosen profession has practised without having recourse to the study of salesmanship. In my estimation, salesmanship is the world's greatest profession. We are all salesmen, in greater or lesser degree. I won't attempt to sell you any cash registers tonight, but will endeavor to show the application of the principles of salesmanship to your particular line of business. We are all part of what we think, and we all get ideas from one another. I hope I shall be able to impart some slight idea to you tonight on the subject.

A young Persian once came into the Rotary Club to demonstrate the Persian rug, and introduced his sister, who weaved the rug. In his talk he said that it was not the artistry of the work, it was not that she was an expert or anything of that kind, that made the rug so valuable, but it was due to the fact that they weaved and thought and put their vivid imagination into their work, put their love, their soul, their entire heart into their work and that was what made Persian rugs so wonderful. That is what we must do in our chosen profession. We live in an age of specialists today, and to succeed we must do one thing a little better than the other fellow, regardless of what that thing is, even to the selling of a paper of pins. The really great men are dying off—haven't felt very well myself lately!

I had a fine lesson in salesmanship years ago from a man who sold cough drops. That fellow wore a long coat and a silk hat and sold cough drops to the crowd gathered around him, talking to them in a terribly hoarse voice, something like this: "Buygh yghour coughgh droghps heregh tengh centghs a boxgh; theygh takgh awaygh allgh soreghness and irrightaghtion in the throaght." Someone in the crowd called out, "Why the dickens don't you take some of them yourself?" The old fellow looked across very much surprised and said, "Whygh I dighdn't thingh of thaght!" He opened a box of cough drops, put one in his mouth and waited

a minute. They were all watching him, and I watched him, too; I think he was a wonderful man, a wonderful personality. Then he spoke up in a clear ringing voice: 'Buy your cough drops here, ten cents a box; they take away all soreness and irritation in the throat!" And they did buy them. He proved it.

No living human being can convey to another that which is not in his own head. I am talking salesmanship, and I am not apologizing for doing so, because I have known nothing else. It is not egotistical. I am simply a specialist. Some of you have perhaps heard of Jack Dempsey, who holds the championship of the world; he holds it because he thinks he can defeat anyone. The moment he thinks he cannot, somebody else will take the crown. Salesmanship is a mental process; the sale takes place in the head before it does in the purse.

In salesmanship there is a very important fact to be borne in mind, and this is that you have five senses. One of the most important is that of sight, the power of visualizing. The eye is twenty-two times stronger than the ear. If I should tell you that I had a lump of sugar in my hand, you would only have my word for it, but if I should show you the lump of sugar, you would know it was a lump of sugar. But, besides appealing to a man's senses, to be successful you must appeal to his mind, to his heart. Psychology, like salesmanship, is a mental process. Strange as it may seem, no person can think of two things at the same time; it is a mental impossibility. There is no neutrality in a human being's mind; we must either accept or reject a proposition. To know all these things is to understand the psychology of human nature. Therefore, it is a good thing to remember that one thought must dominate another. The mind, as I say, either accepts or rejects. If you are negative toward an idea, you are in a destructive attitude toward it; if you are positive toward it, you are constructive in relation to it. If you are going to make a success, there is one state of mind that you must have, and that is a firm belief and faith in your product and in the house you represent; and you have positively to do one thing, and that is, eliminate fear of the other fellow. This gentleman is just a reflection of me; he has eyes, nose, mouth and ears, just the same as I have; he is not a spectator at the banquet any more than I am, just a natural human being. Therefore, to know yourself better is to be in a better position to know the other man. I claim that every man should know every muscle in his own body; he should be his own physician. At twenty years of age a man has an idea; at thirty he has a conviction; at forty a firm conviction; and at fifty he knows. A man is either his own physician or a fool at forty. These are psychological facts, and are particularly important things in salesmanship.

Now, what is the foundation of salesmanship? This is the foundation: Attention, Interest, Desire and Resolve to possess. You must create Attention before you can do anything else. Then Interest. That Interest must bud into Desire; and Desire crystallizes into Resolve to have or wish to possess anything the other fellow has. These also are important things to business: The logic of your goods to the business; the logic of yourself to the business; analysis of your prospect; and the psychology of your sale, or when to present the order. Those are important things in salesmanship.

The power of suggestion in handling the five senses is another very important factor in salesmanship. By the use of this power of suggestion I can make you say just what I want you to. In connection with the imagination, Coué gave a wonderful message to the world and threw a very important light on the subject. If we were to lay a plank, say a foot wide and fifty feet long straight out on the floor, you could walk over to the other end of the room without falling off; there would be no difficulty about it, you would have no hesitancy. You have imagination and you imagine you can do it. But if you put this same plank five stories up, and were asked to walk along it, you would say, No. Why? Because your imagination would tell you that you would fall off. And that is the only reason that you would fall off. Same man, same plank. On the floor you have no fear; up five stories your imagi-

nation brings in the element of fear.

There must be a world of imagination in photography. In London, England, I was at one of an artist's art teas at which he exhibited his pictures to his friends. There were wonderful artists there. One of his pictures was covered up with a velvet cloth. Before removing the cover he gave an elaborate description, a mental picture, of how long it had taken him to make it, how he hoped to exhibit it at the Royal Academy, so that our anticipation had worked us up to such a degree of imagination, ready to expect anything of that picture, and as we looked he got ready and pulled the curtain—and everybody stood amazed and exclaimed, "Isn't it wonderful?"

I don't know anything about the photography business, but I know something about human nature and the way the mind works. Therefore, I will say this: Never let a man put out a proof without a frame or in an unfinished condition. Such a proof shown to a customer does not appeal to him. I would have his picture on the wall and make him want to take it away from me. I woudl not show any desire to make a profit out of him or that I wanted his money; but, if I were an artist, he would say to me: "Is that myself? I did not expect to have it so nice." I would reply: "Our artist thought so much of that that I could hardly keep it out of a frame, and I don't care whether you buy the picture or not, because it is a masterpiece. Just see your eyes, just see yourself as others see you for a moment." How many are you going to sell him? You have created a desire and the desire will do so much work.

If I should take a cigar out of my pocket and hunt around, somebody will hunt for a match for me; that is auto-suggestion; that is where a man accepts your suggestion from himself to himself. Always keep the whip hand, so to speak; and that largely lies in a knowledge of your business. And unless he knows more about it than you do, and until he tells you what you don't know, you are in a position to keep the whip hand.

Emerson said that he is great who can change the trend of another man's mind. A man should never put a question to another man unless he knows the answer to it, negatively or constructively. Now, sir, I am going to ask you a question. "There is nothing else today?" "No, nothing else," is the natural answer. "You don't want to take out any more insurance, do you?" I know what your answer will be. Certainly "No." I got it right the first time.

There are none so blind as those who won't see." The successful salesman is he who utilizes all the five senses, and by some means or other creates Attention, Interest, Desire and the Resolution to Possess. You buy music by the sense of hearing; sugar by the sense of taste; cheese by the sense of smell; shoes by the sense of feeling; a picture by the sense of sight. You know these things, and in doing so you have the better control by knowing something of psychology of the mind or how the mind works. Starting with the prospect and ending with the sale or order, what takes place on the way? What takes place in the mind of the prospect? He brings all sorts of objections; your price is too high, and perhaps a hundred and one other things. It is the customer's privilege to wander; it is the salesman's business to draw him back to the line and let the light of reason into dark places; that is the process by which you have to bring him down to the point of sale or order. He says the price is too much. Well, money is only valuable for what you can get for it.

I was just telling this gentleman (indicating one of the audience) that I was educated as a boy abroad, and years afterwards I went down to the little town where I was born and saw the old people there who knew me when I was a boy, and one of the old folks had the family album, and showed me my brothers and sisters and mother, and myself as a boy. "Who is that?" I ask. "Don't you remember?" they would say: "we could never forget you, but you have grown awfully homely since. You were a handsome little boy."

You just want to get in an appeal to the imaginations of these people and at-

tack them on the point of their emotions when they begin to talk about how much the picture will cost.

A plumber sent in a bill for fifty dollars, and the man who received it objected to the amount and asked for items. The items came right back: Ten dollars for the work and forty dollars for "knowing how." There is talk in that; there is a lot in that "How."

Take this six-pointed star: Health, Knowledge, Enthusiasm, Resourcefulness, Honesty, Work. These things constitute success, and nothing succeeds like success. All these things are of no account unless you put your heart into them. No man can get any great degree of success without this (pointing to health); the good foundation is Health. I wonder how many people exercise?

It never does any harm to check up on yourself. What is your weak point and what is your strong point? You must have a specialty. There is something you can do especially well. Find out what it is.

Fear has killed more salesmen than any other one thing known to the civilized world. If you have a message for a man, believe in your message, use your knowledge, deliver your message.

Don't be like the man who says: "Ay, Mister, you don't want to buy a dog, do you?" "No!" "Don't know anyone who does?" "No!" And then he fades away.

A standing vote of thanks was accorded the speaker for his very interesting and instructive talk.

The regular business of the meeting was then taken in hand, there being forty-three members present.

Miss Olga Dahl, Chairman of the Convention Committee, gave an interesting report of what had been done towards securing the International Convention for San Francisco in 1924. Mr. Morton, of Morton & Company, read a letter from the Zellerbach Paper Company contributing a hundred dollars to the Convention Fund. At this interesting moment there was a most unseemly disturbance at the entrance of the dining room. It appeared that an old man of decidedly rustic type was clamoring for admittance, and one of the waiters was strenuously objecting. There was a long altercation, and the patriarch insisted he had every right to be present, having practiced photography when most of those in the dining room were of that tender age when they filched hypo for sugar.

There promised to be a rough house; then the stranger spied Mr. Lothers and appealed to him. This was the "open sesame," and as the old man entered some one remarked it was he who invented wet plate. Mr. Lothers introduced the visitor to the audience, and he proved more than welcome as the minutes went by, for he kept his new friends in an uproar of laughter. He was indeed very funny. The case began to look suspicious now, as Mr. Lothers and the old man seemed to understand one another in a remarkable way; in short, it looked like a frame-up, it worked so smoothly. But when the old gentleman was departing from the dining room he turned to our president, Mr. Webster, and said, "I wish to contribute to the fund to send delegates East to bring the 1924 Convention here." We all felt the $25 mentioned must have come from the bottom of his heart, for judging from his costume we could not believe it was possible that it should come from anywhere else. And as our visitor departed the question on every tongue was, "Who is he?" He was Guy Kibbee, and it was whispered formerly of the Orpheum Circuit, but now of the firm of Johnck Deran & Kibbee, printers of San Francisco.

As Mr. Kibbee left the room, we noticed Mr. Young, of the firm of Lothers and Young, getting very fidgety. With a smile he drew an envelope from his pocket and discovered that one side of it was blank. "I have a little room here for some notes," he said, "and I wish to decorate it. Will any of you ladies and gentlemen help me do it? Now, what will you contribute to bring the Convention here?" We all felt certain now that the Lothers and Kibbee episode was a frame-up. But why should we grow fainthearted? And thanks to Mr. Young we are able to give a copy of what decorated that envelope. It was but a starter—well, here it is.

Contributors to date to the Convention Fund:

Zellerbach Paper Company, San Francisco	$100.00
Hirsch & Kaye, San Francisco	50.00
Lothers & Young, San Francisco	30.00
Morton & Company, San Francisco	30.00
Walter A. Scott, San Francisco	25.00
R. J. Waters & Co., San Francisco	25.00
Webster Studio, Oakland, Calif.	25.00
H. Lancaster, Martinez, Calif.	15.00
Albert Petersen, San Mateo, Calif.	15.00
H. Sackrider, Marysville, Calif.	15.00
R. E. Scharz, Oakland	15.00
Spencer & Stolte, Alameda	15.00
L. Terkelson, San Francisco	15.00
Holly Todd, San Francisco	15.00
Mrs. Clark of Webster Studio, Oakland	10.00
Miss Olga Dahl of R. J. Waters Co., San Francisco	10.00
Paul De Gaston, San Francisco	10.00
Miss Kathleen Dougan, Berkeley	10.00
Mrs. Guy D. Edwards, Oakland	10.00
Etter Studio, San Francisco	10.00
Edgar Felloes of Camera Craft, San Francisco	10.00
J. B. Moller & Co., Oakland	10.00
Mr. Mullen of Zellerbach Paper Co., San Francisco	10.00
Miss Ida M. Reed of Camera Craft, San Francisco	10.00
Tracy Webb, Oakland	10.00
The Wilton Company, San Francisco	10.00
	$510.00

41st Annual Convention
Photographers' Association of America
Convention Hall, Washington, D. C.
July 16th-21st, 1923

Mark it down on your calendar, and make a resolve to be present at the opening of the BIGGEST convention ever held by the Association.

And there is a reason for it, in fact, several reasons, why you should attend the National this year.

Washington bears the unique distinction of being the only city in the land where commerce and manufacture are forbidden guests and art and architecture allowed to vie with Nature for first honors in effecting the "City Beautiful." The picturesque grandeur of the Potomac Valley was realized as far back as the days of George Washington when he established his home at Mt. Vernon and later requested to be interred there in a simple "brick" tomb on his beloved Virginia shores. The far-sighted L'Enfant was ridiculed for his colossal plan of the city at the time he laid it out, but we of today are reaping the benefits of his genius as a civil engineer.

Volumes have been written about our capital, all of which fails by eloquence to make the lasting impression of a trip to the site of this year's National Convention.

The largest hall in Washington—over three-quarters of an acre—will be taxed to its utmost to accommodate exhibitors who will have on display the very latest equipment and accessories depicting the year's progress in the photographic art. A vast store of information will be available, the importance of which cannot be underestimated by the true disciples of Daguerre. The entertainment feature of the program is getting unusual attention to insure a pleasant trip aside from Convention interests.

Special railroad rates have been secured from practically every section of the country at a saving of 25 per cent over regular fares. Tickets will be issued by local agents on presentation of identification certificate, which may be obtained of the secretary by members on request.

Touring information in the form of trip cards and guides are available for free distribution, thanks to the hearty co-operation of the National Motorists' Association, and may be secured through the secretary. A beautifully situated tourists' camp awaits those who choose to avail themselves of it.

The following hotels are assisting in making the trip financially within the reach of all by granting a special reduced rate to members, P. A. of A. Make your reservation NOW at one or the other:

Headquarters: Hotel Washington
The Arlington Hotel
The Burlington Hotel
The Continental Hotel
Franklin Square Hotel
The Harrington Hotel
The Lafayette Hotel

The Lee House
The New Ebbitt Hotel
The New Willard Hotel
The Powhatan Hotel

The Raleigh Hotel
S. R. Campbell, Jr., Secretary, 722 Bond Bldg., Washington, D. C.
"On to Washington in July"

The Amateur and His Troubles

Conducted by P. Douglas Anderson

Exposure

One of the most important steps in picture making is giving the correct exposure, and yet with the great majority of camera users it receives but scant consideration. In going through batch after batch of Kodak Finishing this point has been driven home to me very forcibly.

All subjects look alike to many and get the same exposure, whether it happens to be an average landscape with foreground object, a close-up portrait in the shade, or a distant landscape. It is in the hopes of making them realize how vital the part it plays in the final results that this article is written.

If the correct exposure is given, all the other operations, developing, printing, and so on, will take care of themselves. There is one point that I wish to emphasize, and that is, that the sensitive material, be it plates or films we are using, is acted upon by the reflected light from the subject we are photographing. A dark object absorbs more light than it reflects, and therefore requires a longer exposure than a light-colored object which reflects more of the actinic rays than it absorbs. If we keep that point in our minds, it will help us out considerably in determining our exposure. We should also endeavor to classify our subjects under at least three headings: Normal subjects, consisting of average landscape views with near foliage, portraits and animal studies in the open, and well-lighted street scenes. Then we have distant landscapes and sand beach scenes, requiring approximately about half the exposure of normal subjects; then portraits in the shade and dark-colored buildings which require at least twice the exposure of normal subjects. There is another point we want to remember, and that is the eye cannot measure the strength of the light; we need some mechanical instrument to aid us, namely, an exposure meter. There are several types of meters: The table meter, in which the subjects, the light conditions are classified, and we arrive at our exposure by calculation. Then we have the meter that uses sensitive paper for measuring the strength of the light; and, finally, we have the type that measures the reflected light. All have their adherents and boosters. You can select the one that appeals to you most, and when you do, learn to use it right, remembering that the golden rule in photography is to expose for the shadows and let the highlights take care of themselves. Another valuable aid to success in photography is to keep a record of our exposures. I always do so myself; it comes in very handy when comparing the results of our trips, and also can be used to advantage at later hunts for pictures.

Cleanliness in the Dark Room

There is one thing that cannot be too scrupulously observed in our dark-rooms and that is the necessity for cleanliness. If it was followed more carefully, we would not have to worry ourselves about how certain freakish things happened, nor how to remedy them. Keeping our hands out of the developer and the fixing bath and using wooden tongs to handle the prints is one thing that will eliminate many of the marks we get, also making sure that

the prints are pushed under the surface of the fixing bath with a wooden paddle will prevent others from appearing. When washing negatives they should be rubbed with a piece of cotton after the final wash to remove any fine deposit that may be on them. If it should be allowed to dry on the negative, there is no real remedy that I know of that can remove it. Our developing dishes should be cleaned regularly. Water with a little sulphuric acid added is very good. Always add the acid to the water and not the water to the acid.

Developing solutions are best made up outside the darkroom; by doing so we kill any possibility of particles of the developing powders floating in the air and causing us trouble. If we will only pay attention to the little things around our darkroom, the results will take care of themselves, and we will soon be turning out work that we will be proud to say is our own.

Lens Hoods

When we received our first camera we were told among other things to be sure and have the sun behind us and shining on our subject, but after a time making all of our pictures under those conditions became tiresome; we wanted to show individuality and go after lighting effects, even if it meant shooting against the sun and the necessity of protecting our lens from the sun's rays made up adopt a lens hood.

The increased brilliancy obtained in our negatives made us use it under all conditions. Camera Craft has at different times published working instructions as to how to construct different types of hoods, but the shade we are most partial to is made of metal tubing, slipped over the lens. The inside is threaded and painted a dead black, the corrugated surface does not reflect the light. We have other metal hoods lined with velvet, but we like the threaded type best. The hood should be made as long as possible without cutting the corners of the plate. If we have a rising front on the camera, allowance must be made for it. The average length should be about equal to the diameter of the lens.

Here are a few pointers compiled by the executive of a San Francisco finishing plant. They should be of interest to the beginner who is using a camera for the first time and also others:

Films Blurred or Out of Focus
Negatives Not Sharp, Caused by Distance Scale Being Set Wrong, Kodak Jarred During Exposure, or Exposed Twice

Don't hold Kodak in the hand when taking Time or Bulb exposures. Rest it on a tripod or something solid.

Be sure to hold Kodak ABSOLUTELY STILL at the moment the snapshot is taken.

Be careful not to jolt the Kodak in pressing the Shutter Release.

Learn to judge distance properly. Be sure to SET SCALE according to the distance subject is away from your Kodak.

Do not use the Meter Scale in setting distances unless you are familiar with it. Use the FOOT side.

In using a Vest Pocket Kodak, pull the front standard all the way out.

Do not make "close-ups" nearer than six feet unless a Portrait Attachment is used. This extra lens enables you to work as close as three feet and yet obtain sharp negatives.

Be careful not to take one exposure on top of another.

If your Kodak is a Box Brownie, press lever in one direction only. Then turn film IMMEDIATELY to next number after taking picture and before pressing in opposite direction.

Listen for the click. "Every click is a picture."

Unsharp negatives will not make good prints or enlargements.

DO NOT PLACE YOUR FINGERS IN FRONT OF THE LENS

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

California Camera Club

Just as, many years ago, the California Camera Club was the pioneer club to inaugurate excursions to Yosemite Valley, this year, June 16th to 22nd, we are having our first outing to the Grand Canyon of Arizona.

Personally conducted by experienced members, with everything planned for your care and convenience, you are cordially invited to join us in our pioneer trip.

We leave San Francisco, via the Santa Fe, Ferry Building, at 8:00 p. m. on June 16th, arriving at the Grand Canyon at 8:00 a. m. on Monday, June 18th. Oakland and Berkeley passengers will board the train at their Santa Fe stations at 8:00 p. m. and Sacramento and Stockton passengers will meet the train at Stockton at 10:30 p. m.

A suitcase or grip will contain sufficient clothing for the entire trip. An old suit or hiking clothes, with comfortable heavy shoes, and a wide-brimmed hat will be most suitable to wear. Wraps or overcoats may be needed in the evenings.

During the entire trip Pullman cars will be our homes, and these will be parked in an attractive spot close to the rim of the Canyon.

Meals will be eaten at the famous Harvey dining rooms, artistic and attractive restaurants, where one may enjoy his meal in comfort. Plenty of time is allowed. The hospitality and cuisine are perfect.

The cost of the entire trip, from San Francisco or Oakland to the Grand Canyon and return, will be $90.00 in an upper and $94.00 in a lower berth. Drawing rooms can be secured in proportion. This includes the Harvey meals en route and at the Canyon, and the Pullman cars will be at your disposal during the whole time. Children under 12 years of age (two to one berth) half-fare each.

One who has not seen the Grand Canyon wonders just what its appeal is. This is the most stupendous scenic wonder in the world—a tremendous chasm, 217 miles long, from 8 to 20 miles wide, and more than a mile deep, its walls and bed scarred with thousands of mammoth rock temples and amphitheaters painted in every color imaginable, and in the bottom, cutting a narrow path between these mountains, flows the Colorado River.

June is the ideal month in which to visit the Grand Canyon, when it can be seen to best advantage, the climate and atmospheric conditions making the trip very pleasant and the colorings at this time of the year appear most attractive.

The Camera Club party will leave the Grand Canyon at 7:00 p. m. on Wednesday, June 20, arriving in San Francisco at 7:30 a. m. on Friday, June 22nd.

The committee in charge of arrangements consists of Messrs. Charles A. Love, Karl A. Baumgaertel, and W. F. Ohlson.

Folders containing further information can be secured at the club rooms, 833 Market street, and as the party will be limited it is suggested that reservations be made early.

STELLA E. MACKINTOSH,
Editor The View Finder.

Milwaukee Camera Club

This go-ahead club recently held its Second Annual Exhibition at the Milwaukee Art Institute. The following members contributed pictures, and their work met with the approval of the judges and received special recognition:

John A. Jeske, John Becker, William C. Verburght, E. D. Studley, R. E. De Land, E. F. Casper, C. B. Dickey, F. G. Wood, E. F. Langland, and M. E. Baumburger.

Mr. A. T. Gaerlitz, secretary of this club, has gone into the photo-finishing business, and has the best wishes of his former associates.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.
Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.
A. E. Davies, General Secretary, 1327 Grove St., Berkeley, Calif.
John Bieseman, Director Post Card Albums, Hemlock, Ohio.
Lovic Meredith, Director Steroscopic Division, Rupperttown, Tenn.
A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

Members of the I. P. A.

Owing to the many advantages, it has been decided by the Chief Album Director to divide the map of the United States into four divisions or sections, so as to have a representative album in each division.

Eastern Division, No. 1: Under the direction of Chas. F. Rice, P. O. Box 245, Mamaroneck, N. Y., comprises New York, New Jersey, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, Delaware, Virginia, West Virginia, Kentucky, Indiana, Ohio and Michigan.

Western Division, No. 2: Under the direction of P. Douglas Anderson, Room 413 Claus Spreckels Bldg., San Francisco, Calif., comprises California, Oregon, Washington, Idaho, Nevada, Utah, Montana, Wyoming and Colorado.

Southern Division, No. 3, under the direction of Frank Reeves, Stamford, Texas, comprises Florida, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, and Arizona.

Northern Division, No. 4: As yet there has been no director named. Prints for this division should be sent to Chief Album Director Louis R. Murray, 927 Ford street, Ogdensburg, N. Y. This division comprises Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota and South Dakota.

These respective directors will be their own secretaries unless an album member in each city is willing to help.

Albums to be issued promptly the first of March, June, September and December, beginning June, 1923. There will be an unavoidable delay this June to the 20th on account of this announcement appearing in the present issue.

The Director to mark each album of his division with name and number, and to notify Chief Album Director promptly when issuing album, stating number of prints and giving list of contributors. After the first round, Chief Album Director will arrange for an exchange, and in this way two albums will travel in each division simultaneously.

Sincerely yours,
LOUIS R. MURRAY,
Chief Album Director.

FORTHCOMING EXHIBITIONS, 1923

August 31st to October 7th.—San Francisco and Oakland International Photographic Salon. Last day for entries, August 11th. Particulars from H. A. Hussey, 64 Pine street, San Francisco, California.

September 8th to October 6th.—The London Salon of Photography. Last day for entries, August 29th. Particulars from the Hon. Secretary, 5A Pall Mall East, London, S. W.1.

November 5th to 17th.—Frederick & Nelson, 1923 Photographic Exhibition, Seattle, Washington. A prospectus will be sent to those interested upon request.

Notes and Comment

Reported by Wm. Wolff

Mr. Newton, who has the Davey Studio at Palo Alto, reports his business extra good.

W. F. Burhaus of San Jose has a new location.

Frank Tinkle, formerly of San Bernardino, has a studio in Santa Cruz.

Leopold Hugo expects a big tourist trade in Santa Cruz this season.

Reno, Nevada studios all report good business.

Mrs. Alex. Holmes has opened her studio again in Eureka, Cal., and is doing nicely.

O. Hageman of Watsonville expects to go to Sweden next year to open a first-class studio. The writer will have to go over at least once a year to get his orders for American-made goods.

Photo Craft shop of Santa Cruz just added a Pako washer to their already up-to-date plant.

The Frederick & Nelson Fourth Annual Exhibition of Pictorial Photography

The following is a list of exhibition awards to go to the prize-winning pictures:

First Prize		$100.00
Second Prize		75.00
Third Prize		50.00
Five Prizes	each	10.00
Ten Prizes	each	5.00

The last day for entries, October 15th. For further information, cards and labels, write to or inquire at Photographic Exhibition Bureau, Frederick & Nelson, Seattle, Washington.

A New Home

We are advised that Mr. E. A. La Bonte is locating at Portland, Oregon. Mr. La Bonte was formerly at 575½ Tremont street, Boston, Mass., and decided to come to the Northwest and establish himself in the city of Portland.

Removal Notice

The Camera Hospital wishes to announce the removal of their plant to room 404, Kamm building, 717 Market street, San Francisco, California.

Their New Address

We learn from Mr. H. G. Cleveland, secretary of The Cleveland Photographic Society, that this organization has moved to larger and better quarters, and will be again located in the heart of the city. In future address all communications to The Cleveland Photographic Society, Rathskeller building, E. 4th street, Cleveland, Ohio.

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Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or secretary of the board of U. S. civil service examiners at the post office or custom-house in any city.

Our Book Shelves

The Science and Practice of Photographic Printing. By Lloyd I. Snodgrass.

This is a practical treatise on photographic printing. The author (a professor of the Illinois College of Photography) says, because of the lack of suitable text and reference books, he found it necessary to bring together from various sources information suitable for his lectures.

The standard photographic books and magazines have been freely drawn upon, both for fact and theory, supplemented by the author's own investigations.

The volume comprises articles on Workrooms, Equipment and Supplies, Elementary Chemistry, Preparation of Solutions, Printing Papers, Combination Printing, Printing Out Papers, Printing in Colors, and so on to the finished product.

The book is very plainly written, not too technical, and should prove profitable to amateurs, professionals and those who intend to join the professional ranks. Published at Illinois College of Photography, Effingham, Illinois. Cloth only, price $3.00, postpaid.—P. D. A.

Lifa Light Filter Handbook.

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The comparative tests of landscapes at the end of the book, photographed with and without filters, should certainly wake one up as to what can be done with the proper filers and plates.

American agents, Herbert & Huesgen Co., 18 East 42nd street, New York. Price 50c.—P. D. A.

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24th, 1912, for April 1, 1923, of "Camera Craft," published monthly at San Francisco, State of California, County of San Francisco.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared I. M. Reed, who having been duly sworn according to law, deposes and says that she is the Business Manager of the "Camera Craft" and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24th, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

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(Signed) I. M. REED, Business Manager.

Sworn and subscribed before me this thirtieth day of March, 1923.

LOUISE BEARDEN, Notary Public.

In and for the City and County of San Francisco, State of California. My commission expires November 14th, 1925.

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CAMERA CRAFT

A Photographic Monthly

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CONTENTS FOR JULY 1923

Cover Design—Ferry Building, S. F., Cal. By W. R. Potter
Portrait of Miss A. (Colored Frontispiece). By H. C. J. Deeks
A Still Life Study (Colored Frontispiece) By Maurice Deeks
The Raylo Process of Color Photography By Joseph W. Gannon 305
Newspaper Photography By L. G. Rose 311
Picture Taking in Europe By Harrison C. Ryker 317
Photographic Lenses. By H. B. Harsel 324
Do You Like Cats? By E. F. 327
The P. A. of A. School of Photography 330
Pictorial Study By Edgar Felloes 334
Forthcoming Exhibitions, 1923 336
Editorial 337
Our Color Frontispieces—Off the Beaten Track—.
For the Professional 338
Meeting of The Photographers' Association of California, 41st Annual Convention P. A. of A. 343
A Photographic Digest 345
Exposures in Copying Stereo-photo-topography.
The Amateur and His Troubles 347
About Developing—Watkins System.
Notes and Comment 349
International Photographic Association 352

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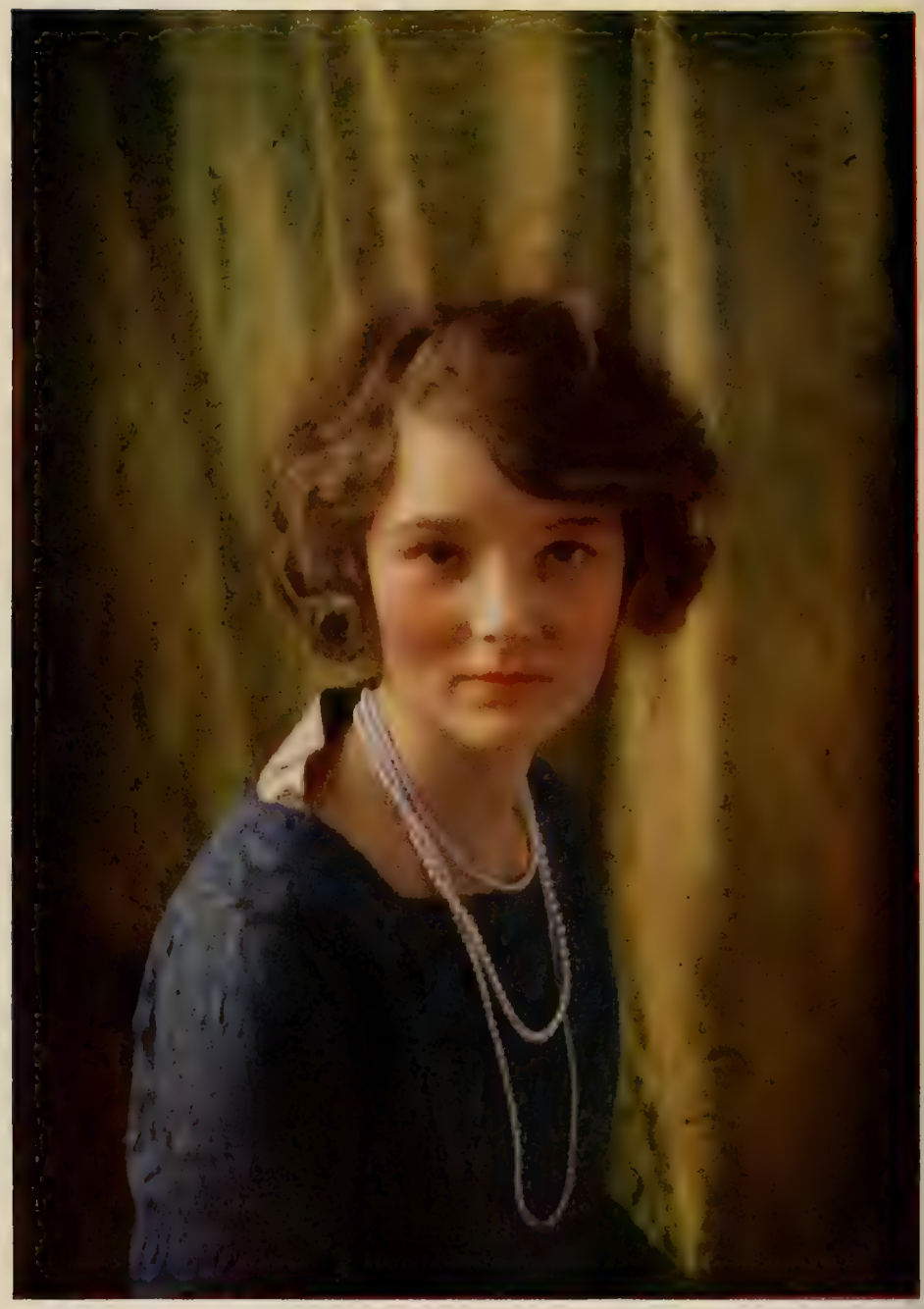

Color plates made direct from a Raylo negative by Beck.

PORTRAIT OF MISS A.

H. C. J. DEEKS

Color plates made direct from a Raylo negative by Beck.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
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P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX JULY 1923 No. 7

The Raylo Process of Color Photography

By Joseph W. Gannon

Since the International Photographic Arts and Crafts Exposition at New York last April, the photographic fraternity has heard much of the Raylo Process of direct color photography, the process developed by Mr. Hiram C. J. Deeks, Vice-President of the American Raylo Corporation of New York. It is the consensus of opinion among those who have examined this process that here at last is color photography sufficiently practical to be of value to amateur as well as commercial and professional photographers.

Ever since Clerk Maxwell, the great physicist, lectured in 1861, before the Royal Institution in London on his theory of vision in its relation to color, many individuals have attempted to develop a process by which photographs in color could be made. Years of inventive energy and thousands of dollars have been expended in the attempt, yet, for one reason or another, no process for securing prints on paper has heretofore been developed which was entirely practical and consequently none has been widely practised.

On the other hand, these investigations have developed certain basic things which must be done and any process of color photography must accomplish these things if it is to be a success. It has remained for Mr. Deeks to perfect the means whereby these things are automatically accomplished so that a person of average intelligence can obtain color results with no more effort, and in no longer time, than is required for black and white photography.

Ten years ago he started work on the development of this process, his aim being to make any number of color prints on paper directly from a single negative plate. His first work was to find a printing method which required no messy manipulation or dyeing. After much research

and experiment he produced a highly transparent coloring which was also chemically inert. In other words, this coloring matter has no chemical influence on bichromated gelatin, which is the light sensitive chemical he uses. He then was able to produce a print emulsion that required no after coloring or dyeing—one that upon exposure to light through the negative develops directly into a colored positive. Thus it may be seen that at the very beginning Mr. Deeks removed much of the impractical from color photography.

Following his development of a printing emulsion, Mr. Deeks next devoted his efforts to finding a means of obtaining a three color negative separation so convenient and practical that it could be used by anybody. To accomplish this, he commenced the development of a camera which would automatically and quickly produce such a negative.

Color separation is obtained by filtering through a transparent color screen. For example, if you look through a piece of red glass at a well-lighted subject of many colors only the reds of the subject will pass through the glass and make an impression on the eye. Similarly, if a color filter is placed in back of the lens and in front of the sensitive plate of a camera, only the reds in a subject will make an impression on the plate. The same holds true for the other two of the three primary colors used, and it is this principle of color separation that is incorporated in the Raylo Camera.

It is well-known that if three positives be made in complimentary colors from three such negatives, and superimposed, they will reform the original colors of the image.

It required a great deal of patient experimental work to develop a camera mechanism which would produce this color separation accurately and at the same time quickly. Numerous models were constructed only to be torn apart and rebuilt to include a different principle. Experiments were made, making the three color separations simultaneously through three lenses, three color screens and on three plates. Many other theories were tested. Finally, however, a mechanism was prfected which made three successive exposures on a single plate through a single lens, the plate, in conjunction with the three color filters, moving into three positions.

Another problem which had to be solved in developing the Raylo Camera had to do with the reaction to light of the silver emulsion through the three color filters. The sensitiveness or speed and also the contrast or gamma, as it is called, may vary through each color filter. These differences in reaction may vary with different emulsions, and even with different batches of the same emulsion. Therefore, it was necessary to first stanardize a panchromatic emulsion which satisfactorily met all requirements, and then develop a mechanism which would give just the proper ratio of exposure through the color screens employed to produce the three negatives in an even scale. This has been accomplished and

"I HATE TO GET UP IN THE MORNING"
Illustrative of Article on Page 327

:hereby much of the previous uncertainty in color separations has been eliminated and desired results are obtained automatically and quickly.

There were many other problems needing solution—minor problems perhaps—but important in making the process successful.

Today the Raylo Camera, completely developed and practical, is available—a mechanism of wonderful precision which in the hands of an intelligent person will give beautiful color results. With it is obtained the three-color-separation, that is, three negatives on a single plate. The plate is 1¾ x 3¼ inches in size and each impression thereon is 1 x 1½ inches. These plates are supplied in a magazine containing six plates. This magazine of six plates is fitted to a lid on top of the Raylo Camera, this step in the operation corresponding to the insertion of a film pack in an ordinary camera. A half turn of a key permits one plate to drop into a carriage within the camera. A turn of another key properly locks it in the carriage and the camera mechanism is then wound. The exposure is now ready to be made, following the adjustment of time of exposure, lens diaphram and focus, each of which is accomplished by means of graduated dials.

One press on the cable release and the three-color-separation is made. It is interesting to note that upon pressing the cable release the following operations automatically take place:—the lens shutter is opened, the first section of the plate is exposed through the blue violet filter for its correct proportion of time, the shutter closes, carriage containing plate and color filter move along, shutter opens and the middle section of the plate is exposed through the red filter for its correct proportion of time, shutter closes, carriage containing plate and color filter move to last position,

shutter opens and the last section of the plate is exposed through the green filter for its correct proportion of time, the shutter finally closing. Of this total time, 90 per cent is devoted to exposure and only 10 per cent to the operations of lens shutter, plate and filter screens.

The wonderful thing about this mechanism is that these eight complete operations, besides the three exposures, are successively accomplished in ¼ of a second. Also that exact proportion of exposure is given through each filter to produce the negatives in even scale, whether the total exposure be a quarter of a second or longer.

Following exposure the camera is tipped, by means of a pivotal arrangement so that when the key which locks the plate in the carriage is released, it permits the exposed plate to slide back in its proper groove in the magazine box. It is then locked in the magazine, the camera righted and by means of an ingenious device, the next plate is registered to drop into the camera so that another picture can be made. After a little experience these operations are accomplished without conscious effort, as simply as with an ordinary camera.

Each operating key is numbered in the proper sequence. Key No. 1 is the first operated, Key No. 2 the second, and so on. There are three preceding the exposure and three following. All keys are automatically locked against operation except in their proper order.

The Raylo Camera is equipped with a Goerz Hypar lens of 2-inch focal length. The widest opening of the diaphragm is F 3.5.

For development of the plates, Mr. Deeks has perfected a developing box by means of which six plates are developed simultaneously in daylight, without handling.

The prints are made by projection. The Raylo negative is placed in an enlarging camera, and projected onto the Raylo Color Sheet. This sheet consists of three patches of colored bichromated gelatin on a strip of celluloid held in a frame. One patch is pink, one blue and one yellow. The color arrangement is in complimentary order to the colors recorded on the negative. Following an exposure varying from 8 to 30 minutes, depending on the density of the negative, this color sheet is developed by immersion in warm water. On it now appear three monochrome positives, one pink, one yellow and one blue. After it is thoroughly dry, the frame holding the celluloid and positives is placed on a Raylo combining board. In addition to a very ingenious micrometer registering device, the combining board has mounted upon it a metal block with means for stretching a piece of white paper over it. The paper is then moistened and the yellow positive pressed against it. When dry the celluloid is stripped away, leaving the yellow positive on the white paper. Next the pink is superimposed on the yellow in the same manner and in perfect register (by means of the micrometer screws) and finally, the blue on top of the yellow and red. This produces the finished print. In this manner any number of color prints can be made directly from a single

"UP FOR INSPECTION"
Illustrative of Article on Page 327

Raylo negative, a fresh color sheet, of course, being exposed and developed for each print required.

In practising black and white photography, a considerable amount of pleasure is derived from manipulation of the printing in order to produce artistic results. On first thought some people might anticipate an increase of this pleasure in color photography, but with a little consideration it becomes obvious that this is impossible. The making of a Raylo Color Print can be accomplished by one, and only one purely mechanical method. This method must be followed with technical perfection and if this perfection is not attained then incorrect coloring, which in most cases is displeasing, will result.

Since no manipulation is possible and since the process is purely routine, practically all users of the Raylo Camera welcome the policy of the American Raylo Corporation to make all prints in the Raylo laboratories. Then too, by being able to secure a print service direct from the parent company, users of the camera are not required to invest in the expensive printing equipment. They are freed from loss by spoilage and from the bother of coating color sheets, which must be used while they are fresh. Eventually print service stations will be established in various centers so that the present inconvenience of forwarding plates to New York, for printing, will be greatly minimized.

From the foregoing it may be readily concluded that the Raylo Process of Color Photography is entirely practical insofar as the photographic and mechanical side of it is concerned.

In regard to the human element entering into the Process, it is interesting to note what Mr. Deeks has to say to intending users of his camera:

"The Raylo Camera is an instrument, a tool **only,** and will give satisfactory color results just in proportion to the amount of intelligence with which it is used. Wonderful and beautiful things are possible with the aid of this instrument in the hands of an intelligent person, but there is not much in it for one who is accustomed or wishes only to "snap as he runs."

"It must not be taken for granted that Raylo color photography is infallible (that correct coloring is guaranteed), or that pleasing and interesting pictures are obtainable by accident or notwithstanding careless and unintelligent use of the camera.

"In black and white photography almost any kind of an exposure will give a result having at least some interest, but in Raylo photography, if the subject be not well chosen, well lighted or well arranged (all in respect to color), then the result may not only lack interest but can be very crude and more unsatisfactory than a black and white picture can ever be.

"The Raylo Camera, therefore, is essentially an instrument for persons with intelligence, and in the hands of such there is no limit to the achievements possible in the field of pictorial art."

THE DITCH

I. Newspaper Photography

By L. G. Rose

Opening up your daily paper, what is it that takes your eye first? —pictures. The bigger the news, the more the interest in the pictures. However, even inconsequential news often goes over if the pictures are good.

Many newspapers now run whole pages of pictures and one New York paper is called the "Picture Newspaper." These photographs are collected from all over and by all kinds of photographers, ranging from an accidental amateur shot to a carefully thought out, planned and plotted shot by a high-priced news photographer. The demand for news photos is enormous, brought about by the fundamental principle that all people and all ages understand pictures. To make it short, pictures speak all languages.

It has been the writer's good fortune to be associated with news photographers at different times and to get to know how these men work, and the following is written with a view of showing the kind of apparatus used and how they work to get results.

When you think of newspaper photography, your first thought is a Graflex camera. There are probably more cameras of this type used on newspaper work in America than any other camera. They are easy to operate and can be quickly mastered. The Graflex is very strongly built and can stand almost any amount of abuse, while the focal plane shutter with which they are equipped is practically trouble-proof. This focal plane shutter gives very good results on high speeds and will give more actual light value on the slow speeds and big apertures of the lenses. This advantage is particularly noticeable in dull light. Another advantage of the Graflex camera is that almost everybody knows what they are for. Several years back, when we used to carry the Press Graflex, I often noticed that they were an "Open Sesame" through the police line—"The Power of the Press." Nowadays, however, with the amateurs carrying the 4 x 5 or smaller sizes, it is necessary ordinarily, to show your press badge before they will let you by. But, the 4 x 5 Auto-Graflex, equipped with a plate or cut film magazine, with a good fast lens, is today considered a good outfit.

The revolving back Graflex is not much used on the newspapers as the extra weight and bulk are objectionable, and the old standby, the Press Graflex, is now used principally for sporting work and special jobs where its bulk and weight are not in the way.

However, the Graflex has a few disadvantages in news work, among which may be mentioned the low position from which the operator views his image, inasmuch as the picture is taken with the Graflex as though

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THE GENERAL RETREATS——
Showing General Pershing at Franklin Field, Army-Navy football game, apparently beating a retreat before the battery of cameras

viewed from a position at about the operator's waistline and, in a crowd, this feature does not work to the operator's advantage. Another disadvantage of the Graflex is that it has no slow shutter speed, a tenth of a second is as low as it will go. However, these disadvantages are more than offset by the advantage of seeing the image right side up and in or out of focus up to the very instant of the exposure, which is a big asset in its favor.

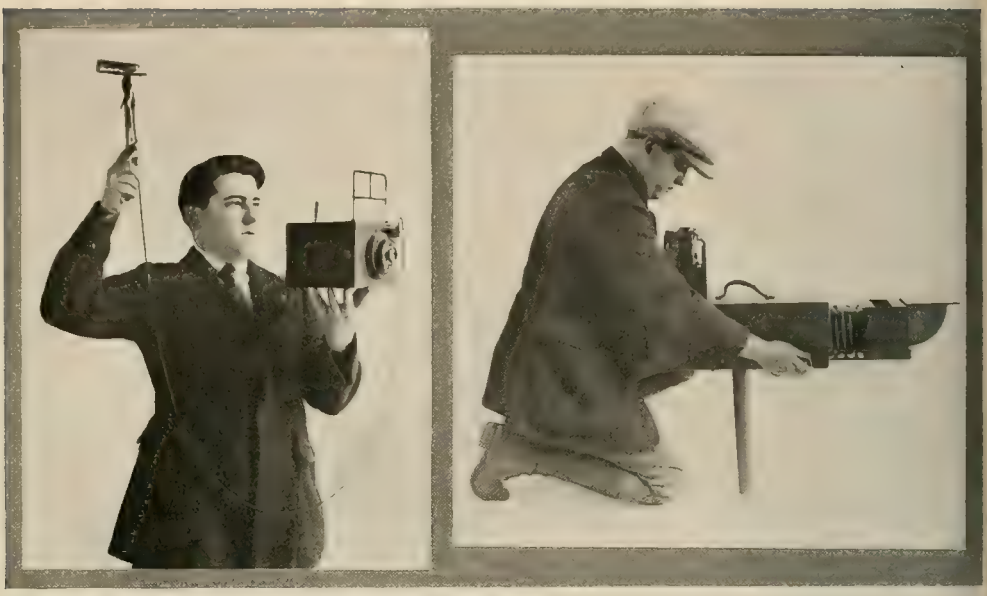
Another camera used extensively in this line of work is the "Speed Graphic." This might well be called the "Graflex' brother," as it has the same efficient focal plane shutter and solid construction, although it does not have the mirror attachment or the image viewing hood. Among newspaper photographers, this is known as a "guess box" from the fact that, in many of their shots with this camera, they guess the focus. Of course, with very little practice they guess right. This camera is much lighter than the Graflex and it is the practice with an outfit of this kind to carry the camera, plate holders (they do not use a magazine with a Graphic) flashlight, tripod and a filter all in a small traveling bag, a big advantage in some news work. This camera is generally equipped with a between-the-lens shutter as well as the focal plane, giving two shutters.

NO. 1 NO. 2

The front shutter is used for time exposures, flash lights and other slow speed stuff on tripods, such as court work, where the noise of the focal plane would be objectionable. It is also much easier to focus with this camera in a dull light, such as an interior, than with the Graflex where the image is reflected on to the mirror. In a crowd, or in making what are known as "grab shots," that is, shots where the people will not pose, the Graphic works to advantage, as it is held to the eye level for all snap shots, as shown in illustration No. 1.

Still another camera extensively used, especially in the large cities like New York and Chicago and among photographers doing court work and difficult assignments, is of a folding type, such as the "Ica," illustration No. 2. This type of camera, to operate, takes considerable practice and time to learn but it has many advantages—also some disadvantages. One of its advantages is that it can be carried in the pocket and its size, 10 x 15 centimeters, or approximately 4 x 6, is a good newspaper size. It may be worked from either a vertical or horizontal position, is light in weight and has an abundance of bellows for copying in court and for using long focus lenses. It is easy to follow a picture with it but—they are quite delicate and apt to get out of alignment, have no high shutter speeds, not being equipped with a focal plane shutter, and they are somewhat at a disadvantage when it is necessary to make several fast shots, one after the other as they are generally supplied with single plate holders.

In divorce trials, society scandals and many criminal cases where the subjects positively will not pose and will do everything to avoid being



NO. 3 NO. 4

photographed, it becomes necessary to make what are known as "grab shots." As these are usually made in hallways, railroad sheds and in all sorts of inconceivable and inconvenient places, with no time or opportunity to put up a tripod and one has to flash them on the "fly" as it were, an outfit for this character of work is shown in illustration No. 3. This particular outfit was made to order and is nothing more or less than an old style box camera with a focussing mount in the front holding the lens and shutter, to which is attached a long cable release connecting with the flash, which is an "Imp" flash gun. The shutter and flash are timed simultaneously. This flash outfit may also be connected with a between-the-lens shutter on an "Ica" or on a front shutter on the Graphic. It will also be noticed that the grab box illustrated has a large metal wire finder which is a wonderful help in many instances.

Illustration No. 4 shows what is known among newspaper photographers as a "Big Bertha" outfit. This particular outfit is a 4 x 5 naturalist's Graflex fitted with a 24-inch lens. The position shown is the way it is used for sporting events such as football, polo, soccer, etc. With such an outfit, it is possible to be on the side lines of a football game, for instance, and get good sized images of plays across the field, due to the long focal length of the lens. While this lens is slow, working about 5.6, some remarkable shots have been made.

Nearly all of the big League basketball games are now covered by such an outfit, oftentimes with the addition of a 5 x 7 outfit equipped with a fairly short focus lens and worked above the home plate in the press box, the "Big Bertha" being worked from the roof of the grand stand or

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CAMERAMEN TRAIN THEIR "GUNS" ON EMILE COUE, ARRIVING IN NEW YORK ON S. S. MAJESTIC

Photo shows Emile Coue, the auto-suggestive healer, surrounded by photographers on arrival in the city

in a high box to one side, and between the two outfits, all the plays can be easily covered.

I woud call attention to the wooden rod supporting the camera in a low position. By photographing from this low position, the players, especially in a football game, loom up large.

Many of the old Press Graflex boxes have been converted into sport cameras by putting on a special extension front and using one of the newer lenses now on the market that give large images with a comparatively short focal length.

As in all other branches of photography, there is as much contention in newspaper work as to what lens is the one best lens to use. Some operators will have nothing but a Carl Zeiss Tessar. Others contend that they can get as good or better results with a Bausch & Lomb Tessar, while still others will swear by the Helliar. The same rule holds good here—almost any good lens will give very good results if properly understood. Not long ago, I covered an assignment at a golf tournament. Part of the day it rained, the light was extremely dull and I noticed a chap working along with an old box camera that had evidently seen long hard service. About every time I made what I considered a difficult shot, using fast plates and a fast lens, wide open, I could hear the zipp of his old shutter.

It interested me and I struck up a conversation with him. I found he was a writer for a golfers' magazine and had been using this old camera for several years. The camera had a single lens working at about F.11, but by timing his shots just at the right position of the swing, he was able to get a large majority of good pictures. And so it is. Stick to a lens, get to know it thoroughly, and humor it if necessary, as you will have to do with any lens to get good results. Of course, it is much easier and is a necessity for newspaper work that you have as fast a lens as can be obtained, which means 4.5 at least, because city editors and assignment clerks do not like "Old Man Alibi," nor do they want to hear the noise of "Failure."

The kind of plates and film is also somewhat of a question. There are probably more Standard Orthonon and Seed Graflex plates used than any other makes. While the Standard Orthonon has not the speed of a Seed Graflex, it has many desirable qualities such as being ortho-chromatic and possessing a heavy coating. It is also a good plate for flashlights. The Graflex 60 has far more speed. In fact, it has so much speed that the average newspaper photographer over-exposes, thus bringing back negatives flat and lacking in contrast. Of late, many operators are using cut films in Super and Par speeds. The films are a great improvement over the old weight of the glass plates, are easy to store, although not as convenient when printing from wet negatives, a handicap, considering the fact that there is very seldom time in newspaper work to allow a negative to dry before making the prints. The various European plates, such as the English Imperial Flashlight and German Agfa, as well as some of the Belgian and French plates are very popular with many operators.

Around most newspapers, there is a large amount of copying to be done for the "morgue" or, as it is now generally called, the "library," as well as the copying of photographs of various society and public people for the files. In fact, a little of everything drifts in for copying, many of the jobs being of a nature that would tax the skill and ingenuity of the most expert commercial photographer, oftentimes calling for Panchromatic or Process plates.

A large number of newspaper exposures are made with flashlight and there are times, although it sounds improbable, when flashlights are made outdoors in the bright sunshine. Shots of this character are made, of course, with the grab box, of people in automobiles, under awnings and in like instances.

(To be concluded next month)

The great thing in the world is not so much where we stand as in what direction we are moving.—Holmes.

MONT BLANC—THE MER DE GLACE

Picture Taking in Europe

By Harrison C. Ryker
Oakland, California.

During 1920, 1921, and 1922, I had the good luck to spend fifteen months on duty with the American Forces in Germany, and was stationed at Andernach, on the Rhine, about twelve miles from Coblenz. Being a confirmed camera bug, I found much of interest not only in the picture taking line, but also in the way of photo lenses and equipment. Those of my readers who are contemplating a European tour might possibly derive some benefit from my own experience. So here goes for a little advice.

In October, 1920, when I went over, I had an American camera 2¼ x 3¼, with an Anastigmat f.4.5. As soon as possible after being settled in Germany, I got a pass to Cologne, and at once fell in love with the camera shops on Hohestrasse. Before I had been in the city two hours, I was the proud possessor of a little Ica camera, Carl Zeiss Tessar, f.4.5, Compur Shutter, size 6 x 9 centimeters,—and all for the grand and glorious sum of $25.00! I used this outfit throughout my sojourn and had the best of results with it.

One will find that the range of exposure for outdoor subjects differs radically in Europe from that in this country. A glance at a map will show that the latitude of Coblenz runs up around Newfoundland, on this side of the world. My first pictures in Germany were taken in November, 1920, in bright sunlight, about two in the afternoon, with an exposure of

COCHEM-AM-DIE-MOSEL

1/25 second at f.11. They were very much undertimed. I soon found out that the correct exposure at that time of year was more nearly 1/10 second at f.8. On the other hand, in summer time, you can make snapshots on a sunny day, up to 7:45 or 8 P. M., and get good results. On my one and only trip to Paris in January, 1921, the weather was rainy the whole time. I lugged a tripod wherever I went and gave what I thought were good long exposures. (I had no meter with me, to my sorrow.) When I got back to the Rhine and developed my films, I found that I had undertimed many of my negatives: the European winter light had fooled me again. I took a picture of the Hotel de Invalides one afternoon at 3:30, and gave it one second at f.11 (sky overcast), and the negative was so thin it was hardly worth printing.

So, if you're going to Europe to take pictures, remember during the winter months to give your negatives all the time there is—or better yet, take a Wynne or Watkins meter along, because if you don't, you'll be sadly disappointed with your photographs.

Another wise and thrifty idea is to fight shy of the commercial developing and printing shop;—don't let them develop your films for you, whatever you do, or you will regret it. The German finisher seems to have a moral dread of developing fully. He uses Metol-Hydrochinon, and judging from results, he develops until he sees a nice image appear on the face of the film **only**, and then shoots it into hypo. Result, profanity and consternation on the part of the innocent customer.

The best course is to "roll your own." If this is out of your line, —if you simply "press the button" and let the other fellow do the rest,

COLOGNE -- THE CATHEDRAL FROM THE HOHENZOLLERN BRIDGE

either save your rolls or packs until you get back home, or else mail them home to your favorite dealer to be developed. Then you will play safe. I could buy Agfa liquid M-Q Developer for two-bits the 16 oz. bottle, and dilute this one to six or eight, for use. So developing was pretty cheap, as also was printing. A box of 100 sheets of Bayer Bromide Paper, size 24 x 30 cm. (10 x 12 inches) cost about $2.00 in 1921.

I used the Agfa film pack entirely. In my estimation it is one of the best emulsions put out by any firm. When using this pack one should be very careful when pulling out the tabs. I spoiled more than one pack because I pulled out a tab too fast and it tore off, leaving the film drawn only half way around from the front of the pack. While speaking of Agfa products, it might be of interest to note that they are putting out a color plate identical (as far as I could see) with the Lumiere Autochrome. I was able to buy them for about twenty cents for a package of 4 plates,

COND, BURG COCHEM ACROSS THE RIVER

OLD STREET IN COND, ON THE MOSELLE

6 x 9 cm. The method of development, reversal, etc., is the same as for Autochrome, and the results seemed as good in every way.

To make the most of your opportunity and get a set of pictures of which you will not be ashamed, I would advise you to set aside your roll film camera for the time being and to equip yourself with an outfit fitted with a ground glass and a film pack adapter. Get a good tripod and focus of each view which you care a great deal about. Your trouble will be more than repaid by the superior results you obtain. A 4 x 5 camera would be better than the small one I used, for with the former, one could use a wide angle lens when necessary. And, by the way, a wide angle lens will be of the greatest value in this sort of work. For instance, you visit the city of Cologne: there is a beautiful cathedral which you wish to photograph. This edifice is over 500 feet high and more than 500 feet wide,—yet it is impossible to get more than about 400 feet away from it and still have an unobstructed view of the whole structure. Result—at the point on the Domplatz farthest from the cathedral, your lens won't take in the whole building, or anything like it. So use your wide angle lens, and get the picture. The Rathaus at Cologne is even a harder proposition than its cathedral. The narrow street in front of it only allows

THE KAISERIN AUGUSTA RHEINANLAGEN AT COBLENZ

A CORNER OF THE MARKTPLATZ, ANDERNACH-AM-RHEIN

of ones retreating about 100 feet from the base of the building. And its tower (profusely sculptured and the most interesting part of the whole thing), is over 100 feet high. Another example is Strasburg. Try to get a shot at the Strasburg Cathedral with an ordinary camera. Perhaps a few centuries ago such a picture might have been possible, but now, in the words of the poet, "Them days is gone forever."

It follows logically from the above remarks that a rising and sliding front is also a very necessary adjunct. One will find that while in Europe, most of ones photos are not of landscapes and people, but of buildings. Therefore the need of a means of keeping the vertical lines parallel is imperative.

The ordinary mortal, possessed of a modest amount of worldly wealth, will not have very much time to spend in any one spot. He will be in one place one day, another the next, etc. He will only have one chance to take a picture of any given subject. He will have to take those pictures, if he wants them, weather notwithstanding, rain or shine,—for he won't get another chance at them. It follows therefore that the man who is best prepared "every day, in every way" to take photos under any condi-

SUNDAY IN MID-OCEAN, ON AN ARMY TRANSPORT

MEDITERRANEAN FISHING BOATS, MARSEILLES

tions, will emerge from his little European spree with the best set of photographs.

Nearly every sort of commodity was ridiculously cheap in Germany, owing to the greatly depreciated value of the mark. Some articles, for which there was a great demand, were costlier than others. Books, music, etc., were cheap as dirt: one could buy music for one-tenth what it would cost over here. Photo goods, cameras, etc., however, came higher, since nearly every tourist, as well as many of the soldiers on duty in Germany, were in the market for cameras or field glasses. I bought several Goerz Dagors, 165 mm. focal length (6½ inches) in Compur shutters, for about $30.00 each, and could have procured them for half that amount if I had waited a couple of months longer. The mark's value was different each day,—consequently the price in dollars of any commodity changed with the mark. If one was lucky enough to get in and buy up what he wanted just after the mark had taken a long hard skid, and before the shopkeepers had a chance to raise the prices, he could buy things for a song. Carl Zeiss and Goerz binoculars, eight power, wide field, cost about $18.00. Agfa film packs, 6 x 9 cm., (2¼ x 3¼ inches) cost about 25 cents. A good focal plane reflex camera would cost between forty and fifty dollars. One

could buy a meal, ala carte, at the best restaurant in Coblenz or Cologne, (in November and December, 1921) for about fifty cents a plate, including a quart of Rhine or Moselle wine. Rüdesheimer, one of the finest of Rhine wines, cost around twenty cents a quart in those days. However, why bring back sad and tender memories? Why speak of the glorious Münchener and Pilsener, at two cents a stein;—the cognac at seventy-five cents and Scotch whiskey at a dollar a quart? (The last two items were not in my line of specialties.) But I wander far from my subject.

The pictures accompanying this article were all taken with the outfit described above, except the one of the transport at sea, which is the work of a little Ansco Speedex. My regular basic exposure for ordinary work in sunlight in spring, summer and autum, was 1/25 second at f.18 (German system of numbering stops). For dark foregrounds, I'd open up to f.12.5 or f.9. The only photo shown with which a tripod was used, is the view of Cologne Cathedral from the Hohenzollern Bridge. This was taken at 9 A. M. on a November day, stop f.18, exposure one second.

In summarizing, take along the best camera you can afford, have rising and sliding front,—take along a supplementary wide angle lens,—use your ground glass often, and keep clear of the foreign developing houses, and you'll be happy.

THE MARTIAL SPIRIT

Photo by W. H. Moser

Photographic Lenses

SPEED — DEPTH OF FOCUS — COVERING POWER

By W. B. Harsel
Cuyahoga Falls, Ohio

I have answered I believe several hundred questions on the above three subjects within the last few years. As the matter is of general interest and none too well understood, I have set down some facts here for the enlightenment of those who desire information.

Speed

This question can generally be answered in the following terms without going into mathematics. If your lens is engraved 6-inch focus or F.6 it means that the largest diaphragm aperture will be just one inch in diameter or 1/6th of its focal length. In every instance where I have mentioned the fact to a customer that the lens in the camera is very fast, moderately fast or slow, I have always been asked, "How can you tell whether a lens is fast or slow?" The usual answer is, by the aperture engraved on the lens. For instance, F.3.5, F.4.5, F.5.6, etc. Very few amateurs ever pay any attention to aperture; one instance of this is evidenced by a recent experience. A customer made several rolls of exposures, these were so badly undertimed that not one would yield a satisfactory print. I requested the camera be brought in and suggested that the lens perhaps needed cleaning, on final inspection it was discovered that the diaphragm was closed down to F.128, and the shutter was set for a speed of 200th of a second, the reason for the undertiming of the exposures was at once apparent.

Referring again to speed, say, F.4.5, if there were only one make, grade and model of F. 4.5 lenses, the word speed would mean a fixed proposition. As there are some dozen different makes of lenses however, the F.4.5 aperture, means something more. For instance, a lens of four piece air space construction will be found to work faster than a lens where a portion of it is cemented and balance air space, with four glasses in all. You will also find while the aperture and focal length are the same, a lens of five pieces of glass is still slower than either of the above although engraved the same. Another instance, I have a lens of four piece air space construction marked F.7.7., that is faster in actual speed than a lens of eight pieces of glass engraved F.6.8, to the average amateur this doesn't mean anything. In reality it means that the more glass that is used and also cement will slow the lens down in actual performance, even though the aperture is identical and the focal length the same.

Depth of Focus

This is a subject that has caused more controversy, I am sure, than all the other properties of lens construction. Every manufacturer will tell

"THE WORLD LOOKS BIG TO ME"
Illustrative of Article on Page 327

you that any lens of identical aperture and focal length will have the same depth of focus, regardless of construction. This is positively not so. It may be in mathematics and in optical law, but you can at any time at your convenience prove it is not so. A large percentage of this failure is due to curves and lack of compactness in setting up a lens. Take a lens of 6-inch focus and have it measure 1½ inches outside dimensions through the glass, and one of 6-inch focus that measures 2 inches through the glass, the first or 1½-inch lens will have a greater depth of focus than the second or 2-inch lens, although both lenses may have an aperture of 1 inch. Take any half dozen lenses of different manufacture, select 6½-inch lenses, and all working at F.6.3, take each lens and focus it on a flat card tacked up against the front post of some picket fence that is 100 or more feet in length. Now set up the camera at an angle about 30 degrees to the side of the front picket, then take each lens and focus at full aperture on the picket with target, the camera standing 20 feet distant. You will find that every lens out of six will show a varying number of pickets in focus, whereas they should all show alike according

to optical laws. There is something in every lens that makes it differ, were it not so it would only require one brand of lens for all.

I have two lenses that cost quite a few dollars to match up for stereo pictures, they are both of the same make and aperture, but it required a selection of quite a few lenses to get two alike, also, it required optical adjustment in one of the lenses.

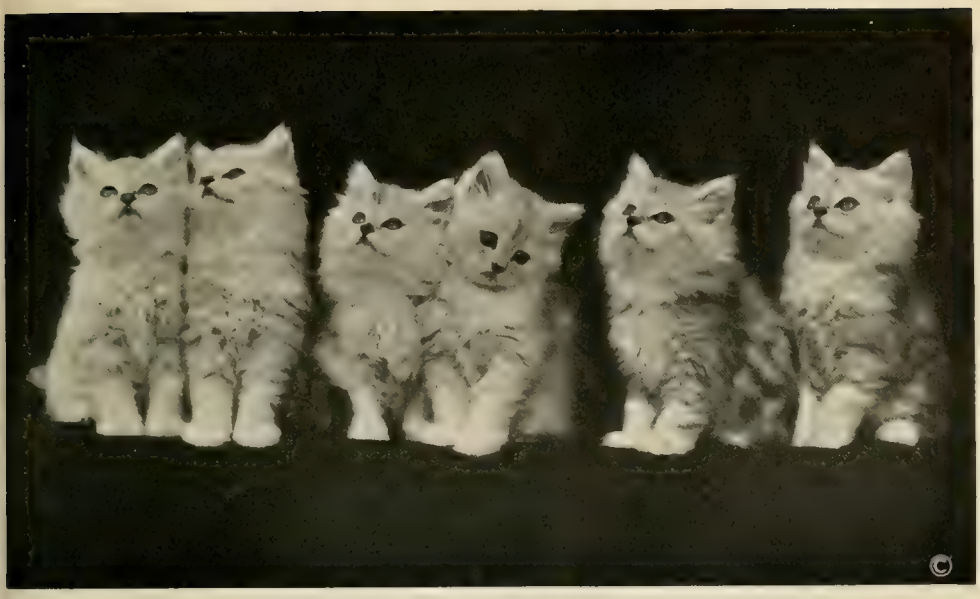
Covering Power

This quality in a lens is limited to just one thing and that is its light circle. If your lens is of 6-inch focus and it shows a circle of light of 8-inch diameter on a plate, you may stop it down to a pin-hole it will not cover more than the 8 inches; it will, however, sharpen up the image at the margins but that is all.

I have several lenses F.6.8, and of 6-inch focus, one covers an 8 x 10 plate to the corners when stopped down to F.16, and others will cover 6 x 8 and that is all,—Why? Because one lens has only 6 glasses and is very compact while others have 8 and are extended in the mount, cutting down or increasing the angle of view as the case may be.

There are wide angle lenses that cover 8 x 10 plates at F.16, still there are anastigmats of the same focal length at F.6.8, that will do the same thing—Question, why a wide angle lens? Because lens makers of fifteen or twenty years ago put all the compactness and workmanship in a lens to make it useful for a general purpose instrument. Today, if you secure a lens that covers its listed plate with a small margin to spare for rise and fall of the front board you are doing well, as some of our camera manufacturers so easily state, it is not expected you should use your $60.00 lens in any other camera than the one it came in; indicating conclusively that quite a few of our lenses are not up to standard. Time was when we could take our 6-inch lens and use it in our 4 x 5 and then use the same lens in our 8 x 10 as a wide angle. Covering power is limited to a small margin in our modern times and this virtue is giving way to speed.

SUNSET



GREAT EXPECTATIONS

Do You Like Cats?

By E. F.

Illustrated with Copyright Photographs by Jas. B. Herrick, San Diego, California

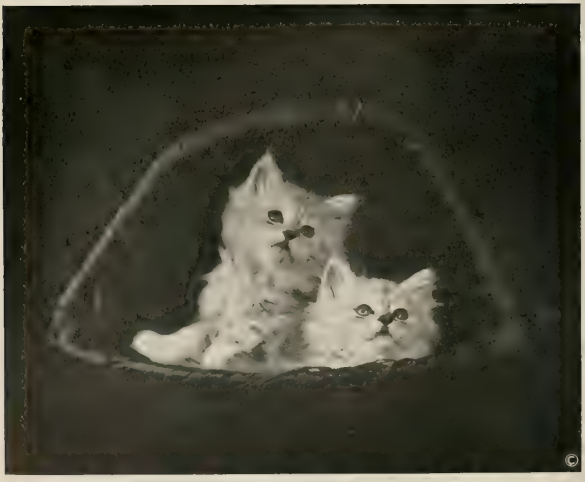
We have not forgotten you, little folks; we know you like cats. In this number of our magazine—yes, this magazine is for you also—you will find many pictures of our friends, mostly kittens. Of course, you like kittens! They are so soft, pink-nosed and purry, and they can feel happy and sad, like you can.

Just look at the little kitten on the next page; it finds there is no room in the basket. Its brother has taken more than his share of space; that is not fair, is it? But notice in the next picture, both of these kittens share and share alike. That is fair. Now see how happy they are.

* * * *

There is probably no art store in the land but has a series of cat photographs of varied sizes and prices for sale. There are no animal pictures that meet with such general favor as cat pictures; these are "consumed" by the thousands, both plain and colored. A few photographers have found it worth while to specialize on these subjects. The demand tempts them. But we believe the sales of cat pictures could be doubled if the makers would study the value of titles. These titles should be very neatly lettered in the margin of the photographs. This matter of title needs careful thought; it is at times as important as the picture itself. It is better with "a kick to it." Sometimes a suitable title will flash in one's mind, on other

"THERE'S NO ROOM FOR ME"



"QUITE COMFY"

BLUE-EYED PRINCE CHARMING

occasions one must dig for it—yes, really dig. The title we want is one that will bring a smile to the prospective purchaser of the picture. We may even stretch a point in the choice of title, but try and tempt that smile; it is then more than likely that picture will sell.

Here is an example of what we mean by stretching a point and giving a kick to a title. We once received a picture of a cat licking the top of a milk bottle. The photographer had written on the back of photograph for title "Cat and Milk Bottle." With a title like this the picture would certainly have to sell itself. We wished to improve its chances—to help it along, as it were. We killed the original caption and substituted the following thought—the cat's thought: "If my tongue were as long as my tail, how happy I could be." Now we happen to know this title under this picture has brought many a smile, and, we believe, this title will double its selling chances. One should appreciate the fact that a good idea may be lost if presented incomplete. Do not overlook the value of titles.

Mr. Herrick, the maker of these pictures, has this to say concerning them: "The kitten pictures were made in a cat kennel with a white muslin screen spread over the wire roof to diffuse the light. The shutter speeds ranged from 1-35th to 1-75th of a second, and the stops used were from F 4.5 to F 8. The negatives were all taken on portrait film, with a revolving-back Auto Graflex, fitted with a Series II Velostigmat lens of 9½-inch focus. I have found the greatest asset in cat photography is—unlimited patience."

SCHOOL BUILDING AT WINONA LAKE, IND.

The P. A. of A. School of Photography

The Story of a Professional Association School that has Succeeded

Note: Since the organization of the Professional Association School, in connection with the Photographers' Association of America, much interest has been shown by photographers here. The desirability of having a somewhat similar school on this Coast has been commented upon by some of our correspondents.

We are able to inform those interested that Mr. Will H. Towles, of Washington, D. C., the director, thinks that such a plan is quite feasible, and he would be willing to conduct a summer school in San Francisco, where photographers could secure a post-graduate course of instruction, if a sufficient number of students were forthcoming.

We here publish particulars and pictures of the doings at Winona Lake, Indiana, the place at which the P. A. of A. school is established. This is the second season, and the school opens July 30th, 1923, and ends August 25th, 1923. For particulars, address S. R. Campbell, Jr., Secretary Photographers' Association of America, 722 Bond Building, Washington, D. C.

The School

Is the materialization of the efforts of the Board of Directors, P. A. of A., to give to the Photographic Profession a means whereby the finer points of Photography, both operation and business methods, could be presented to the progressive individual by the best, practical instructors in the country. The site, Winona Lake, Ind., was selected because of its proximity to the center of population and its being one of the most popular inland summer resorts. Premises and the School building were purchased and the first session held in August, 1922, with results so gratifying to all that it is considered a success from the start. The capacity class of last year has justified doubling the accommodations for this year.

CLASS IN LECTURE ROOM

The Instructors

Under the able directorship of Will H. Towles, of Washington, D. C., aided by some of the most prominent specialists in retouching, printing and other necessary adjuncts to the photographer's art, many of the pupils who had but small knowledge of photography when they entered the school, had been taught not only the fundamentals of the art, but were on the road to success as accomplished photographers at the finish of the course.

The Equipment

In addition to the indoor daylight camera room of last year, will be an indoor artificial-light camera room and an out-door garden which lends itself to very pleasing and unusual effects, thus giving every phase of photography of which the average man may make use and thereby insuring a real understanding of posing and lighting in both studio and home portraiture.

Manufacturers and dealers are so enthusiastic over the educational features of the course and the concise manner of presenting the various subjects to the individual, they willingly furnish all equipment of the latest type to promote a thoroughly modern course of instruction.

The Course

Every department of Photographic work will be taken up at the School. Some of the more material subjects in which students will be given specialized instruction will be as follows:

Camera Work, Posing and Lighting. Two hours camera-room work, per day, for each student. Personal criticism by Mr. Towles.

DEMONSTRATION IN PRINTING ROOM

Laboratory and Dark Room Work. Complete new room and equipment under personal supervision of Instructor.

Retouching. Specialist on "Stunt" printing in addition to regular instruction.

Color Work. Specialist on this lucrative branch of the business.

Business Methods. Lectures to include Advertising, Studio Deportment, Salesmanship, Organization, and Accounting.

Additional Features

Six hours a day will be devoted to School work, thus giving time to indulge in the numerous vacational sports for which Winona Lake is noted. Devotees of baseball, golf, swimming, boating, fishing and camping will find their wants well supplied. A well proportioned day of work and play makes the ideal recreation.

Hotels—Room and Board

Last year the rates for room and board to the students were exceptionally reasonable and a wide latitude of choice was possible. This year, if anything, rates may be lower than last, and as for the quality of food offered, any student of 1922 will vouch for its excellence.

Those who file their application for Scholarship will receive, some time before the opening of School, July 30th, a circular showing all available hotels and boarding places where they may make suitable arrangements prior to their trip.

DIRECTOR TOWLES DEMONSTRATING BEFORE STUDENTS

Applications

Applications for scholarships in the School are now being filed; more than one-third of the available hundred places have already been filled without advertising.

The entire cost of the course will be $50.00, of which $10.00 must be sent in with the application at the bottom of this page in order that a reservation may be made. Balance is payable at the School.

It is well to remember that the Association is running the School for the benefit of the Photographic Profession and not for any financial profit and that every member of the Association is interested in feeling that the student will leave the School at the end of the term more than satisfied with the results he has attained.

In order that we may plan intelligently for the needs of this year's class, all applications should be filed by June 15th.

Special railroad rates are granted to Winona Lake Chautauqua during the entire season. Students should bear this in mind and take advantage of these reduced rates.

We should co-operate because it increases efficiency; it promotes good feeling; it improves quality; it creates enthusiasm, and it gets results.—National Lock News.

Pictorial Study

By Edgar Felloes

In many a photograph lies hidden a picture, but it takes much instinct and not a little training to discover it.

The average photograph is a record, a reminder of what was seen; it helps one to visualize a memory, its purpose is reflective. On the other hand, if we are able to accentuate the photograph's pictorial side, that picture will naturally appeal to a far greater number, its beauty becomes apparent, it does not lean on a memory to be satisfying.

It has been remarked: "It would not be difficult to improve our pictures if we knew just what to do." There are many, a very great many, who know how to do a thing if they only knew what to do. It is up to us, then, through study, to learn what to do. That is the important point. The next, where should we go to learn what to do? The fact that our lesson may be learned at home is almost startling; so much so, the majority would scarcely dream of looking there.

We have illustrated books and pictured magazines. Could the world live without pictures? It hardly seems so, so generous is the supply. Besides what we may find at home, there are those energetic publishers who bring out excellent reproductions of artist's work which sell for a few cents each. Then again there are the art catalogues. The picture published to illustrate my article "A Pictorial Problem," in the April issue of Camera Craft, was taken from an art catalogue; it served to teach a lesson. The same may be said of the illustration I am using today; from this also we can learn something.

By studying a picture I do not mean we should copy it. That is fatal to our progress. What we should do is to learn to appreciate why an artist throws in a light here, a shadow there. We shall with a little study find these things are done for accentuation, and by that accentuation the artist reveals his individuality. That individuality is a hint of the soul of the worker, the worth while. It belongs to the creative and merits reward.

To the pictorial photographer I would say, study pictures most of the time but study photographs only part of the time, to familiarize ourselves with photography's technical progress, for our work should be technically good if we desire to make it artistically better. We are greatly helped in our appreciation of pictures by realizing the probable shortcoming of a similar subject photographically rendered. This point I hope to make clear by reference to the cut "A Mountain Brook," from the painting by Alexander H. Wyant, N. A.

Probably many readers have photographed a somewhat similar scene, and it will take but little mental effort to recall, with very dissimilar result. Broadly speaking, their negative showed but two parts, a light and a dark. The dark portion, even though fully timed and possessing

ALEXANDER H. WYANT, N. A.: A MOUNTAIN BROOK, ADIRONDACKS

Collection of The Buffalo Fine Arts Academy
From Bulletin of the Art Center, New York

plenty of detail, was flat and uninteresting. This portion of the picture did not seem to belong to the upper or light portion, because it was not connected by a repetition of the light. The photograph, though true to nature, is of itself not interesting pictorially. It belongs to the map class, and as such it may have a value, but as a picture it should have another quality —romance.

Cover up with a piece of dark paper the light portions in the foreground of this picture, the rill, the rock and shelving bank; contemplate the change a moment, then suddenly remove the paper and note the differ-

ence. There is something now to arrest the attention; the eye is interested. It can enjoy the pool of water, which the artist has greatly accentuated by the lights surrounding. Does this spot not suggest romance? Now all these things or their equivalent might have been in the photograph, but as they were not accentuated the eye did not linger; the spectator was barely conscious they existed. He approached the photograph, and seeing nothing especially interesting from the near to the far, the eye naturally skips it all; it then dallies in the distance, hopeful of pleasure. The photograph now surveyed brings no thrill, the romance did not materialize; a sense of disappointment is all that remains.

The point I wish to impress upon the student is, the accentuation of the light in the foreground; that is what counts. It echoes the light in the sky, but it does not challenge it, and because of the detail introduced it claims first attention by reason of greater interest. Please remember this, those who think a picture should be fuzzy to be artistic. On the contrary, here is an excellent example of what photographers understand by selective focusing. The point of interest is depicted by the artist with beautiful drawing, the overhanging rock is full of character; it is brittle. There is nothing about its handling suggestive of blending or softening. It is just honest rock, that is all. The waterfall shows the same careful draughtsmanship. There is no attempt anywhere to "improve" on nature; honest work meets all requirements.

"It would not be difficult to improve our pictures if we knew just what to do." Our illustration answers this implied question, I think. It teaches us the artist has accentuated most that which he liked best, and that is the lesson for us. The reader will note it is entirely a question of personal choice based on certain broad requirements of composition which we have learned to call art.

My object in pointing out this course of study is to encourage those interested to use the negatives they have for the development of the pictorial. The effort will not be lost. It will serve to make us more appreciative of the opportunities as nature presents them, and we shall always have a reserve power to bridge difficulties when nature fails.

FORTHCOMING EXHIBITIONS, 1923

August 25th to September 8th.—Toronto Salon of Photography. Last day for receiving prints, August 1st. Particulars from J. H. Mackay, Secretary Salon Committee, Toronto Camera Club, 2 Gould street, Toronto, Ontario, Canada.

August 31st to October 7th.—San Francisco and Oakland International Photographic Salon. Last day for entries, August 11th. Particulars from H. A. Hussey, 64 Pine street, San Francisco, California.

September 8th to October 6th.—The London Salon of Photography. Last day for entries, August 29th. Particulars from the Hon. Secretary, 5A Pall Mall East, London, S. W.1.

September 10th to 15th (Incl.).—International Exhibition of Pictorial Photography, New Westminster, B. C., Canada. Last day for entries, August 31st. Particulars from Secretary, D. E. MacKenzie, Hart Block, New Westminster, B. C., Canada.

November 5th to 17th.—Frederick & Nelson 1923 Photographic Exhibition, Seattle, Washington. A prospectus will be sent to those interested upon request.

SAN FRANCISCO PUBLIC LIBRARY

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FOUNDED MAY 1900

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Our Colored Frontispieces

No sooner had photographic science grasped with certainty the making of a monochromatic image by the wet plate process than man indulged in visions of photography in colors. No one dreamed in those days that we should have to wait so long for tangible results. No one dreamed of the vast amount of money experimenters would have to provide and did provide in endless research work. From time to time, these many years, have we been assured that photography in colors had arrived, only to later realize these claims were premature. And so research has gone on and on for a seeming will-o'-the-wisp, each investigator contributing his quota of knowledge, gained of experience, to the common good.

The latest report on color photography to reach us is "The Raylo Process," and we publish a specially written article by Mr. Joseph W. Gannon, descriptive of it. Furthermore, we print for this occasion a double frontispiece in colors, to satisfy the natural curiosity of readers who wish to know just what this new process will do.

These pictures are reproduced from the original color photographs in color half-tones, to make them available for the printing press.—E. F.

Off the Beaten Path

Probably, the subject we speak of here has not occupied the attention it deserves. In every holiday resort there are always what may be called land-marks and these are invariably sought by the amateur photographer who feels in duty bound to include these objects in his photographic collection. These land-marks in a new community may consist of anything from the just completed railroad bridge, the county court house, or the newly decorated city jail. All these things have their uses of course, but are they an acquisition to one's pictorial collection?

We should think it would strike these photographic enthusiasts that they could do better by buying good post card pictures at 5 cents each than using up their own plates or films. It would be far better to save these for something original or pictures off the beaten path. The more popular a land-mark is the more sure a print of it may be found at the dealers, and it should not be forgotten that the photograph in question will have been made by a professional under the best conditions of lighting; it pays him to do so. The amateur can hardly expect to do better than this either in quality of work or in price. Think this over and realize the pleasure of following the old adge—"Live and let live."—E. F.

For the Professional

In the Interest of Commercial and Portrait Photographers

MEETING OF THE PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA

Held at Hotel Stewart on Monday Night, June 11th, 1923

After the dinner, which was accompanied by orchestral music, President F. A. Webster opened the monthly meeting.

The President: We have been indebted to "Camera Craft" for so many things that I do not know whether we are indebted to the same good people for the music this evening.

Mr. Lothers: A few of us, including Camera Craft, planned it as a little surprise.

The President: We have enjoyed the music very much. I will now ask Mr. Lothers to introduce the speaker of the evening.

Mr. Lothers: The subject of the talk this evening will be "Selling Photography by Mail," and I cannot say too much or compliment the speaker too highly on his known ability as an advertising specialist. A few weeks ago the San Francisco Advertising Club called upon him to talk to them on this subject. He is associated with Emil Brisacher and staff, advertising engineers, one of the largest advertising agencies in this city. The instance was quoted of an editor saying that, in twenty years, of all the advertising literature that he had received through the mail, he never remembered receiving anything from a photographer, and I think that holds more or less true in this country in relation to the photographic business, and for that reason I think all of us will get a few ideas this evening from Mr. McKie Donnan.

Mr. McKie Donnan: Ladies and Gentlemen: After what my fellow-conspirator, Mr. Lothers, has said, I believe that the proper thing to say when you get up after being introduced is first something becomingly modest. In regard to myself, because the time is short, I will pocket all the accusations for the time being and take it out on him tomorrow. I am sorry that the orchestra has left, because I wanted to sing you a little song. As a speaker, I am a very good singer, and I am very fond of this song because it is one I wrote myself; and as a writer I am also a very good singer. I was particularly inspired to write this one song because there is a great deal of heart interest in it behind my answer to the question, "Is Marriage a Failure?" My boy is nine months old. Now, two weeks ago, about two o'clock in the morning, he was in the crib and I was on the couch, and he was warbling away in the morning; and I made up a little song and gave it to my son. The title is "Come to the Quarry, Dear, I'll Rock You to Sleep"! (Laughter.)

As a matter of fact, what Mr. Lothers said about me being able to sell you photography by mail, in the first place it is not the truth, and in the second place it is a dam lie; therefore, I cannot tell you anything about it. I feel very much out of place tonight. It puts me in a bad position, almost as bad as the man on the train sitting reading the newspaper, who looked at his watch and then put it in his pocket. A chap came along and leaned over and said: "P-p-p-pardon m-m-me, c-c-can y-y-you t-t-t-tell m-m-me the t-t-time?" But the fellow just kept on reading, and so the poor chap had to go along and ask another man to tell him the time. A man across the way came over and said: "Pardon me, but I noticed you had a watch and looked at the time, and I am curious to know why you didn't answer and tell the man the time when he came over and asked you." "D-d-d-did y-y-you th-th-th-think I w-w-wanted my d-dam h-h-head knocked off?" (Laughter.)

If I were to tell you people how to run your business, I would get my head

knocked off. I have to take what is often mentioned as the ferry between here and home and have to get home by a certain boat. I have a wife and baby over there waiting for me—at least I hope they are. I hope it is not like a friend of mine who recently got a letter from his wife. He had sent her down to Los Angeles on a vacation, and he got this letter from her: "Dear Tom: We are having a wonderful time. I enjoy it very much down here, particularly the children. We know a very nice man by the name of Jones; we like him very much, particularly the children. Mr. Jones seems to take a particular interest in the children; and we took him riding, and he had lunch with us, and this afternoon he took Marian out swimming, and we think a lot of him, particularly the children. God bless you and keep you, from your loving wife."

There is one thing that I am particularly thankful for tonight, that in some small way I have been credited with being a speaker. In a small way and once every six months I can get a free meal. That is the very happy part of being an advertising man; you do appreciate getting a good meal. I always lick my chops when I think of an old chap back East who could eat any time and anything he wanted to. He dined at an exclusive club and always had boiled eggs and strips of bacon and toast and coffee every morning from a colored waiter, and as he went out after he had got his breakfast he would say, "Charge it." And he got away with it. One morning he came in and had plenty to eat, and he called the waiter over to him and said, "Give me my breakfast but eliminate the eggs." "I am sorry, sir," said the waiter, "but the cook has just broken the handle off the eliminator, so you will have to have them boiled."

Hall, who writes the funny stories for the Philadelphia Record, always smokes cigarettes while he is talking. I just love to hear that man inhale smoke. He makes one of the best after-dinner smokers I have ever seen.

To get down to business in the few minutes that I have left—for which you may be truly thankful that the ferries are still running. There is so much that can be said that no person wishes to be scientific or technical to a girl about advertising. As a matter of fact, since I have been here I have come to the conclusion that Mr. Lothers should not have introduced me as a speaker at all. He should have introduced Miss Theresa Hirsch, of H. Tracy-Webb Studio, Oakland. We have been sitting talking—I mean Miss Hirsch has been talking to me—and anything I may tell you tonight will be just what she has been telling me. And Mrs. Webb has told me already that Miss Hirsch says she has never taken any courses in salesmanship or advertising; and yet Miss Hirsch has told me all about the very practical things they are doing, everything they are doing over there in Oakland; why, I can tell you anything now after talking to Miss Hirsch. There is absolutely no mystery about advertising. I have a customer who can go on a trip. He will go from New York, down the river at night, arrive at Albany, sit down at the hotel, and start in and tell all about the Palisades and all the other cheerful places and the breezes they had, and if you have ever taken the trip you know it, and if you have not, it is like any one of a number of other wonderful trips; but when he talks it out on paper or tries to dictate it he gets back to his office style. The letter he writes from the office, if it were received by the same person to whom he had been talking in the hotel, would not be recognizable. It contains the same facts, but when this man is talking he can tell you just as quick as he thinks, whereas when he is writing he is businesslike and starts getting formal to the extent of being ridiculous. Both good letter writing and good advertising are done in the same way. If you can write a good letter, you can do good display advertising; if you can do one you can do the other. There is no particular art, no trick in it. Some will say, I can write a letter when I am saying something to a friend of mine, but I hate to write a business letter. Some think they cannot write a good letter and others have a leaning toward it, just as some people like to read and some don't. Tom Meighan and Valentino have probably raised more family likes and dislikes than any other one

person around the evening fireside. No two people can think alike and no two people can do the same thing equally well. If you can remember this, and if I am one-tenth of what Mr. Lothers says of me as being a successful copy or advertising man, if I can write one-tenth as well as he says I can, if I can produce as good ideas, if I can produce as great a quantity of advertising—if I can do any of these things, say ten per cent as well as some people say I can do them, then I am a sort of a famous advertising man. You can put it down in the book that Miss Hirsch and I have taken a great deal of interest not in psychology but in advertising.

If you sit down to write a letter, even if you are going to send it to a thousand people, pick out one person who represents the type of those people, and just write to "Dear Bob" or "Dear Mrs. Jones," and visualize who that person is and write a little personal letter to her, and that letter will contain and mean more than if you had written whole volumes and more volumes about it—and that is all it amounts to fundamentally.

I know a book got out some time ago, "How to Collect Money." We need to have some sort of a book like that—I do. When it came right down to the proof of the pudding, in every instance a woman was clever enough to collect the money—always was clever enough. She was natural enough to talk to the man in his own way. She beat all the solicitor gang of shyster lawyers. "Dear Mr. Jones: I do not know why you have not sent that money; just put it in a letter to me or tell me when you can." No blooming technical, legal, formidable proposition that they would not read if they did owe you the money, and would not send the money if they did read it.

I had to write a letter in which we wanted to get a lot of young men to come in and open an account at a retail store. The man who had written the letter proposing to take over this account had a long letter—I am not disparaging a long letter; he had the right idea. But just as quick as he started he wrote in the wrong way. I told him so, and he did get warm. He wanted to write in a general sort of way instead of picking out one fellow and saying "Dear Bob." I wrote three paragraphs, had the man sign it and send it to a selected bunch of the community, about a hundred and fifty letters in all. About fifteen I think came in, and their accounts averaged fifty dollars when they opened—that is, seven hundred and fifty dollars on the whole blooming letter, which cost just ten dollars to get out. And they will tell their friends. I want to warn you of one thing, and that is, do not start something that you cannot finish.

I am going to spin some little stories about portraiture, and they may not fit, but if they do, just write in the technical details and excuse me. Suppose you want to feature kid stuff. Suppose that you do, for instance, as one very well-grounded young lady, young and beautiful, does who is in the room tonight. She just goes out and gets a bunch of the data in the way of names and follows through on these things, and when Johnny Jones is six months old she writes to Johnny Jones' mother asking, "Isn't it time to have the dear boy's picture taken, for he'll never be six months old again?" And the same when he is twelve. Imagine how Johnny looks when he is twelve months old; he'll never be a year old again. I tell you, Miss Hirsch told me something absolutely unknown to me, although a simple, obvious thing to do! What would you do with your next-door neighbor if you were going down to have your kids' pictures taken? Get Miss Hirsch to talk to you. Suppose you want to get wedding pictures, or get business men? The average business man feels like a perfect ass before the camera, like a kid caught at the jam pot. Take a few business men; make up your little list, study good live methods. Here's your text: "Do you hate to have your photograph taken? Here's one that you want to have taken! Because down in this studio we have studied business men! We know what kind of photograph a business man wants to have taken! We put around you that sort of an atmosphere, that sort of a feeling in a picture that will lend itself to you!" Suppose you only take fifty of these letters. Make a start, fol-

lowing through for two or three months, and see if it is good enough to follow through further.

Do not bite off too much, because it is so easy to put it over till tomorrow. The fact is that the advertising man is paid to do regularly something in probably more or less of a skilled way that you yourself would not do regularly, but probably could do just as well, and the reason is because you can check on me and you cannot check up on yourself. That is the biggest excuse for an advertising agent. He has nothing else to do but see that you are advertised; whereas, if you have to do it yourself you leave it from day to day, and that is why I say, start in easy; see what sort of a letter you will write; bring it to me, and I will probably inform you that I see no objection to it. You can get business this way, and the more simple, the more natural, and the more logical you are the more easily you will get what you want. Take your old customers and try to get more business from them. Feature a certain line of things—business men, bankers, brokers, children or what not. Take that little list and sit down and experiment on it. Check up an advertisement, whether good or bad, that is, to see whether it made any money. It is all very well to be nice and altruistic and pick up a magazine and see a beautiful advertisement. Did it make any money? What did that other rotten-looking advertisement make? That is the only check up as to whether your methods are good. It is a good letter if anybody pays any attention to it. Not that every letter sent out will get a quick response. It is not logical that you look for these people to be ready for you to pick them at that particular moment; but if you get acquainted with the kind of letters, as to what is needed, before you get out any letters whatever, then you can choose between a good or bad letter, and plan a campaign accordingly over a period of six months; and the cost, say a thousand dollars. Then you have to get ten thousand dollars' worth of business (say ten per cent of selling), because that would make your living a net profit for you, therefore it was a good campaign if you put up a thousand dollars. If it did not make something like that, it was a rotten one. That is the only test that could be given in the final analysis.

In the few minutes that I have been here, have you got that one little point, which is the science of advertising? If you have not, it is because you have not had enough practical experience. It is a matter of getting the mean average. To start with, Johnny is six months old, and then on down the ages; keep at it and you will be all right. When you are a proud mother or a bombastic father like myself you will understand why you must just be human. I like that idea, beautifully expressed by Ella Wheeler Wilcox:

So many Gods; so many creeds;
  So many ways that wind and wind.
  While just the art of being kind
Is all this sad world needs.

There seems to be so much in everything that is not human, in science, politics, everything. (Applause.)

The President: I want to thank you for this heart-to-heart talk. I would be glad to have you come in at any time, and I will ask Mr. Lothers to see that you do come in.

* * *

The regular business of the meeting was now taken up.

Roll-call and reading of minutes, which last were approved as read.

The Treasurer, Mr. Walter Scott, reported on the state of the finances.

Miss Dahl, Chairman of the Convention Committee, read a very detailed and clear report on the work of her Committee.

MISS DAHL'S REPORT

Our committee has selected Mr. L. B. Morton from San Francisco and Mr. H. Lancaster of Martinez as delegates to attend the International Convention to be held at Washington, D. C., July 16-21. Besides these two, our Los Angeles members have selected Mr. A. Putnam to represent us from the Southern part of the state. These delegates will be sent at our expense, as you already know.

Besides these three delegates, Mr. G. F. McCullagh of Berkeley and Mr. Chauncey McGovern of this city will go at their own expense. Also Col. E. H. Merrill and his executive secretary, Mr. Harry H. Main, will be in Washington during that week and help us win the International for 1924. Mr. Anderson of Camera Craft will also be there. This makes eight good men and true who will put up a valiant fight for our International.

As you know, we had pledged at our last meeting $510.00. Since that time pledges have come in from the

Eastman Kodak Company, San Francisco	$100.00
Howland and Dewey Co., San Francisco	50.00
American Chemical Co., San Francisco	10.00

and from the letters we sent out to the members we have secured from

A. H. Muhl of Haloid Co., San Francisco	$ 10.00
Commercial & Photo View Co., Oakland	10.00
Rapid Blue Print Co. of Los Angeles	10.00
Gabriel Moulin, San Francisco	20.00
Hans Girschick	10.00
Owl Drug Co., San Francisco	10.00
Chas. I. Rice, Red Bluff	10.00

This makes $750 all told to date, besides $125 as per the telegram from Mr. Swarzwald, which I will read. This makes $875 of the $1200 needed. Of the amount pledged we have collected $245 to date, but we know the amount pledged is as good as money in the bank. I will ask Mr. Morton to report, as he has done a great deal and has some interesting things to tell us.

Received at dinner meeting, not previously pledged, through the efforts of Mr. Ralph Young—

Mrs. Ethel L. Payne, San Francisco	$15.00
P. S. Daniels, Modesto	5.00

Since the meeting we have received from the California Card Mfg. Co. of San Francisco, $50.00, making total pledged and received to date $945.00.

Mr. Morton spoke on the work of the Convention Committee, he being one of the Association's delegates.

Mr. Lancaster spoke on the nature of his work as a delegate to the Convention.

Mr. Anderson read a letter from E. H. Diehl, President of the P. A. of A., which informed us that an evening for entertainment had been set apart, to be known as California Night. He also eulogized the talk on Ethics by Mr. Blumann before our Association, which was published in Camera Craft.

Mr. Young spoke in detail on the pictures, the work of the members, which would be shown at the Convention.

Miss Dahl's report for the Convention Committee, together with the Committee's choice of delegates to the Convention, was unanimously approved and adopted.

Mr. Daniels of Modesto invited the members to his city to see the new dam under construction, and assured them that the Chamber of Commerce would make them welcome.

Mr. Rose of Chicago greeted the members of the Association.

The President: I want to admonish you to make a special effort to be present at the next meeting, as it will be the last meeting before our delegates leave for Washington, and I ask you to come and give them a royal send-off. We will put our meeting ahead one week and hold it on Monday, July 2nd, which will be just three weeks from tonight, in order to give our delegates a good send-off.

Mr. Stopple (representing the Photostaff Workers): The Commercial Photographers have worked out a schedule of prices for our convenience and the elimination of guess work and price-cutting, and for the general acceleration of harmony among the trade, which is something for the entire West country to follow, and I hope every association will copy. I think we have made great progress and are far ahead of any other business in agreeing on a price list. We have figured out a price list on one to five hundred prints. You can understand the great advantage of this, as you can refer to an index list right away and tell your customer at once. This eliminates all uncertainty, and I think that no city in the country has made such progress as San Francisco. (Applause.)

NEWS NOTES

41st ANNUAL CONVENTION

Photographers' Association of America

Convention Hall **Washington, D. C.**

JULY 16th to 21st, 1923

The 41st Annual Convention, P. A. of A., has all the earmarks of developing into the largest and most successful Convention the Association has ever held. Plans have been underway for several months and have now reached a stage where the success of the meeting, from an educational and entertainment point of view, is assured and will exceed the fondest hopes of the most optimistic. For example—The original plan of the Booth layout of the Convention Hall allowed sixty-six feet at the south end of the 280-foot main floor, to be used for a Lecture Room, with the Picture Exhibit to be located on the Balcony overlooking the whole scene. The sale of Space has been so vigorous and the demands so great, it was decided at a recent Board Meeting, to hold all the lectures in the National Guard Armory, adjoining the Hall, thus releasing the old Lecture Room site to the additional Booths and a larger Picture Exhibit. This arrangement will work to a decided advantage in effecting greater quietness in the Lecture Room, where the programs of the Association and the Commercial Section will alternate, thus permitting attendance by interested members, ad libitum.

It will be well worth the trip to Washington to see Mr. J. E. Mock demonstrate the Photography of Men, to see Frank Scott Clark demonstrate the Photography of Brides, to learn how Walter Scott Shinn handles the subject of Child Photography and hear what Nicholas Muray has to say about Pictorial Photography. Miss Peggy Stewart, Mr. Gus Chilcote, R. L. Davis, of the Bureau of Standards and C. K. Berryman, cartoonist are other notables who cannot be heard every day and all, provide a program that is brimming over with the pertinent subjects for the progressive Photographer.

Exhibitors who have taken space, to date, are the following:—

Altek Photographic Corp.
Anderson Manufacturing Co.
Ansco Company
Atlantic Photo Supply Co.
Bausch & Lomb Optical Co.
Bell, W. S. & Company
Brieloff Manufacturing Co.
Butler Speith
California Card Company
Chilcote Co., The
Colegrove Bros.
Collins Co., The A. M.
Cooper-Hewitt Electric Co.
Cramer Dry Plate Co.
Defender Photo Supply Co.
Eastman Kodak Company
Furst Brothers & Company
Graf Optical Company
Graham Co., Inc. The J. S.
Gross Photo Supply Co.
Haloid Company, The
Hammer Dry Plate Co.
Haworth Company, John
Japanese Water Color Company
Johnson, L. M.
Johnson Ventlite Company
Lodge Co., The E. N.
Medick-Barrows Co.
Murphy Company, Inc., The Geo.
National Carbon Company
National Engineering & Refining Co.
Pa-Ko Corporation
Photogenic Machine Co.
Photo Art Shop (Eduard Blum)
Presto Manufacturing Co.
Rockford Photo Appliance Co.
Simplex Photo Specialty Co.
Sprague-Hathaway Company
Sussman Photo Stock Co.
Taprell-Loomis Company
Wagenhorst & Co., J. H.
Warren Products Co.
Wollensak Optical Co.
J. W. Mc Cabe Company

Desk Space

Abel's Photographic Weekly
American Photographic Publishing Co.
Bulletin of Photography

Camera Craft
Holliston Mills Co., Inc., The
Michigan Photo Shutter Co.

The Picture Exhibit promises to be one of the largest ever hung and will be International in character with displays from Europe, Australia, Canada and New Zealand.

The Entertainment side of the program has been worked up to provide a thoroughly enjoyable visit to the Nation's Capital and devotes a certain amount of time to sight-seeing trips to the principal points of interest. The Daguerre Monument, erected by the P. A. of A. in 1890 to commemorate the "First half-century of Photography," will be decorated with a wreath while a similar tribute will be paid America's Unknown Dead at the Arlington Tomb.

For those historically inclined, the Arts and Industries Building contains probably the finest collection of photographs and relics depicting the evolution of Photography from the first permanent Heliograph by Niepee, to the present day.

Is it any wonder, with these attractions, the Board are anticipating a minimum attendance of 2000 Photographers at Washington, this year? Decide to go, NOW, and lay your plans accordingly.

Having made up your mind to attend, the next thing is to write the Secretary, No. 722 Bond Building, Washington, D. C. for A Round Trip Identification Certificate to secure the 25 per cent reduction in railroad fare. This is an innovation, this year, in that ALL CERTIFICATES will be issued by the Secretary instead of obtaining one from the local railroad agent. It will enable members to secure their round trip ticket at their HOME STATION and dispense with validation at the Convention Hall. There are other advantages such as reduction of registration delays at the Gate which will work to mutual advantage of Officers and Members.

Write Now for your Railroad Identification Certificate.

The following Hotels have granted a reduced rate to members, who are advised to make an early reservation.

Headquarters	Single Rooms	Double Rooms
Washington Hotel	$4.00 to $6.00	$7.00 to $10.00
Arlington Hotel		6.00 to 12.00
Burlington Hotel	3.50 to 4.50	5.00 to 7.00
Continental Hotel	3.50	5.00 to 6.00
Franklin Square Hotel	3.00	4.00 to 5.00
Harrington Hotel	3.00 to 3.50	5.00 to 6.00
Hotel Hamilton	4.00 to 8.00	6.00 to 12.00
Hotel La Fayette	4.00 to 5.00	6.00 to 8.00
The Lee House	3.50 to 5.00	5.00 to 7.00
The New Ebbitt	3.50 to 4.00	6.00
The New Willard	4.00 to 6.00	7.00 to 10.00
The Powhattan Hotel	4.00 to 6.00	5.00 to 10.00
The Raleigh Hotel	4.00 to 7.00	5.00 to 10.00

Free touring information is available to members who choose to come by auto. This courtesy has been extended by the National Motorists Association, who are ready to furnish route guides or maps to Washington from any part of the country. Drop the Secretary a line and open the way for a trip by the best roads to the National Convention.

S. R. CAMPBELL, Jr., Secy.
722 Bond Building,
Washington, D. C.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Exposures in Copying

Provided that it is possible to illuminate the copying easel with lamps of sufficient brilliance to enable them to be retained at a fixed distance from all originals, and also to arrange for standard conditions in the dark-room, there is no reason why copying should not be carried out either continuously or very intermittently without errors in exposure. Several writers have dealt with the classification of originals, so that I need not dwell on this point, except to say that my method takes as its basis the copying of an "average" bromide print, and other classes of originals have given to them definite factors for multiplication or division. This, let me say at once, is all the arithmetic that is required in working a quite satisfactory system.

Practically all the confusion and error arise from the fact that the stops as marked upon a lens have very different values when employed in copying work, and the calculations usually proposed to overcome this difficulty are not only cumbersome but usually also are beyond the average junior assistant, more especially when more than one lens is used at varying extensions.

The system which I worked with considerable success for quite a long time was initiated by standardizing the power and position of the lamps at the start. Then a lens was put on the camera with a diaphragm aperture of an inch. That is to say, it was probably an eight-inch lens with the iris set at F 8, or else an eleven-inch with the stop at F 11. The camera was extended so that sixteen inches was the distance from the stop to the ground-glass, and then was slid to and fro (without altering the extension) until some matter upon the easel was sharp. Thus the result obtained was that the actual value of the stop (of one inch actual diameter) was F 16. An "average" print was then pinned up and a plate exposed in steps and developed for a given time, and the correct exposure noted.

A sheet of paper was then inscribed with the ordinary apertures from F 6 to F 45 in a column. Opposite F 16 was written the exposure arrived at by the test as just explained. Opposite each other stop was written—in round numbers, of course—the proportionate exposures for all the other apertures in the list, by the ordinary rule of halving for each stop larger, and doubling the exposure for each stop lower. As a matter of fact, as the lights were not of great brilliance, a little extra was added to the theoretical exposures for the smaller stops.

This procedure was repeated with a line subject upon a process-plate, and the corresponding exposures marked against each stop. Note that only one test was made in each case, that of an extension of sixteen inches with an actual aperture of an inch in diameter, quite irrespective of how the lens diaphragm was marked.

Having had this double list, for copying upon the plates usually employed, as well as for process-plates, neatly typed, it was mounted on a card which was pinned upon the wall between the dark-room door and the copying camera, so that it could be examined at a glance. A cheap yard-stick was hung beside the camera on the same side, so that zero was always above the lens. Obviously, the actual extension of the camera could be noted by the figure against which the ground-glass stood. It will now be realized that if the eight-inch lens was in use (with the stop set at F 8 as before) the rule would indicate the value of the stop according to the extension in use. That is to say, if the extension registered twenty-two inches, the exposure would be read off on the table against F 22, and so on. For other lenses

all that was necessary was to set the diaphragm at the figure represented by the focal length of the lens itself to obtain the standard one-inch aperture. For instance, a four-inch lens was used at F 4 and a thirteen-inch lens at F 13, for which the pointer would be fixed somewhere between F 11 and F 16.

Similarly for extensions between those representing stop values an exposure between those two upon the list would be given.

If it were necessary to use a smaller actual stop, obviously the exposure would be read off on the list, and this would be doubled for every step down upon the diaphragm, but by employing good lenses of suitable focal lengths this was only required for subjects of exceptionally fine detail and of large area. The only variations that proved necessary were two, and these were not at all under the control of the operator. The first was fluctuation in the strength of the light. After a while it was noted that this occurred usually at specific times of day, probably owing to variations of the load at the supply works. If batches of copying were in progress at such times, an occasional plate was developed as work progressed to check results. The other trouble was due to the fact that batches of plates of the same make vary in speed. This was overcome by ordering reasonably large supplies, and noting when a new batch came into use, and then developing one or two before proceeding. If a decisive alteration in exposures was required, a bit of paper would be gummed upon the exposure table with the alteration pencilled upon it; for instance, "plus 25 per cent," meaning, add 25 per cent to all exposures.

By thus standardizing all possible factors, and by reducing practically all the others to a matter of tabulated procedure, it became possible to entrust a junior with large batches of quite difficult copying, including even the production of brilliant line prints from many-colored originals upon tinted papers, and that at the shortest of notice. On the rare occasions that a negative made by this method fell short of the very high standard set, it was seldom so much out that it could not be saved by the ordinary methods of reduction or intensification or by printing upon a suitable paper. Hence it would be quite within the facts to claim for this system a 99 per cent efficiency. At the same time, it must be pointed out that it is little use adopting one part of the system without the rest. If the distance of the lamps from the easel, or the make of plate or one of the many other factors is frequently altered, any attempt at semi-automatic methods must necessarily fall to the ground.—D. Charles in British Journal of Photography.

Stereo-photo-topography

An interesting demonstration has been arranged for the scientific section of the French Photographic Society by M. J. Predhumeau of his stereo-topometer, the construction of which I mentioned a few months ago ("B. J.," January 13, 1922, p. 15). The two negatives are taken from two stations, the separation of which is preferably 500 times the average separation of the eyes. The exposures are made on the two halves of a slow fine grain plate in a stereoscopic camera provided with two lenses, which are alternately uncapped. The centre line at each exposure is parallel to the straight line joining the two stations, and the optical axes are horizontal and perpendicular to the line of the stations, the various adjustments being made by means of a theodolite serving as a support for the camera and by aid of a sight which for each exposure is placed at the station not occupied by the camera, that is to say the theodolite and sight, each on a tripod, exchanging places between the two stations.

In using the negative thus obtained it is replaced in the same camera as that in which it was exposed so as to take up precisely the same position as that when the exposures were made. The camera is then placed in the stereo-topometer with the same inclination of the centre line as that which was given to it when making the exposures, this line being thus obtained parallel with the base. To each objective is attached a converging lens of 32 in. focal length, and the average is observed from behind by means of a stereoscope having a magnification of about ten times, and

fitted with prisms for reversal of the images. As a means of receiving in the stereoscope the light which comes from the objective, there is placed behind each of the elements of the stereogram a lens of plano-convex field having its focus at the exit node of the corresponding objective. The combining apparatus includes, in front of the photographic camera, a large frame turning on a vertical axis. A movable carriage on this frame carries with it a vertical rod, along which can be raised or lowered a "voyant" (a positive transparency of a flag or other design), lighted from behind. The various movements of the "voyant" are controlled partly with the hands and partly with the feet of the observer using the stereoscope. At the instant when the flag (an image of which is projected on to the negative by each objective) is seen to come, in the stereoscope, exactly on a point of the subject, the "voyant" then occupies in space the position where the subject appears to be reconstituted stereoscopically. Then by means of a pantograph connected to the "voyant" the lines of the subject of the horizontal sections of the ground showing the configuration of the latter can be traced on the plate. The great advantage of this apparatus is that all the registrations are done in the photographic camera used for taking the negative and not in the stereoscope, as is the case with the von Orel stereo-autograph. The whole construction calls for few exact adjustments; only the pantograph and its connection to the "voyant" require to be made with great accuracy.—B. J. of Photography.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

ABOUT DEVELOPING

There are many ways of developing one's plates or films, but the method that takes the labor out of the darkroom is undoubtedly the tank system. By its use we can develop one or a dozen exposures in the same time; also, the average quality of our negatives will be higher than by any other method.

Some of our amateurs cling to the tray method of developing. They get great enjoyment watching the image appear and gradually develop to its full density, judging their results by transmitted light. The danger in tray development is that if our exposures vary we try to force development of the under-exposed plates to get density and detail in the shadows, with the result of excessive contrast. Again, our over-exposed plates flash up quickly in the developer. In trying to save them, the tendency is to under-develop, and the final negative is flat and weak.

Watkins System

The beginner in photography who wishes to do his own developing by the tray method has not the experience and practice to judge his negatives by transmitted light and tell when development is complete. It is necessary for him to have a guide or some method to enable him to time his development.

When exposures are reasonably correct, the Watkins System of factorial development is recommended. The following is a brief outline of the method. Our different developers—Metol, or Elon, Pyro, Amidol, etc., have a developing factor. If we multiply the time it takes our image first to appear by that factor, we get the correct time to develop the plate.

For example, we are developing with Amidol, the factor of which is, we will say, twelve (12). If our image takes thirty seconds to appear, we would multiply that by twelve (12)—30 x 12—360 seconds, or six (6) minutes would be the full time.

There is no need to hurry when calculating the time. First, take the time when developer is poured over the plate, note the time it takes for image to appear, then cover the tray with a piece of cardboard. You can now figure out the full time to develop at your leisure. Covering the tray with cardboard is a good thing to do whenever possible. It prevents any light from reaching the plate and causing fog.

When using the tray it is necessary to rock it gently. This keeps our developer in motion and prevents unevenness in our negative.

Developing Tanks

With some tanks it is not necessary to have a darkroom; with others, a darkroom is only necessary when loading the plates in the tank. With the open tank, all of the operations have to be carried out in the darkroom.

With the amateur the roll film camera is the most popular. By using the Kodak film tank for developing his rolls a darkroom is not necessary, the daylight box that enables us to prepare the film for development taking its place. When preparing the film for development the instructions that come with the tank should be carefully noted and followed. I have in mind one particular point that is sometimes neglected—that is, to make sure that the gummed paper at the end of the film is attached to the paper covering of the spool. If we neglect to do this, disaster will follow, the film will roll on itself and develop in patches. The developing tank is usually fitted with a light tight and leakproof cover. This is a desirable feature, as it enables us to turn the tank from end to end during developing, thus preventing stagnation of our developer, and giving us more brilliancy in our negatives.

Film Pack and Plate Tanks

With the film pack and plate tanks a darkroom is necessary for loading the packs or plates into them. The film pack tanks have generally a light tight top, but some of the plate tanks have not, and are therefore non-reversible. With this type during development, the cage or rack that holds the plates will have to be raised and lowered several times to prevent uneven development; it also means staying in the darkroom. In selecting a plate tank one will have to remember this and be governed accordingly.

About Cut Film and the Open Tank

Since the Eastman Kodak Company introduced their cut film the open tank system of developing has become very popular with those who hitherto have been using plates. Cut film has many desirable features to commend it. It is light in weight, non-breakable, and non-halation. We have the choice of several emulsions—**Process, Commercial,** Commercial Ortho, Panchromatic, Portrait par speed and Portrait super speed. When using the open tank the films should be gently raised and lowered several times. I myself keep them in motion nearly all the time, but this is not necessary. If one should wish to examine their negatives during development, the film hangers provide a very convenient way for holding them.

Developers

We now come to what developers to use for the tank. I myself favor the good old A. B. C. Pyro Soda. Many of our prominent amateurs use other developers and swear by them.

The safest thing for the amateur to do —at least while he is at the experimental stage, is to use the developer recommended by the manufacturer of the plates or films he is using.

There are various reasons for this. The principal one is that the time of development with different plates and films varies, and until one has had experience he is liable to go astray and not get desired results. I am quite aware that many amateurs use one, two, or at the most three types of films or plates for their work, and they know just what they are doing with their favorite developer, but the beginner has not had that experience, and he has to play safe.

Types of Negatives

I have often been asked what I considered the ideal negatives. I generally answer the question by first asking one myself. What printing process do you wish it for? The two printing processes most commonly used by the amateur are

the gaslight or developing-out paper (D. O. P.) and the daylight or printing-out paper (P. O. P.). The negative most suited for D. O. P. and enlarging papers is one that is slightly on the thin side, with a long scale of gradation. In other words, one that has been fully exposed and slightly under-developed.

For P. O. P. we need a more plucky negative, one with more contrast. The tank offers a very certain way of getting these types of negatives. It is simply a matter of either prolonging or cutting short our time for developing. When using the factorial system we use a higher or lower factor. The soft or diffused focus lens is very popular with our pictorial workers in America. When handled right it is a wonderful medium with which to express oneself. The tank offers a very convenient and sure way to develop negatives made with it. With its aid we can easily get the type of negative that is necessary before we can fully express what we saw when making the exposure.

About Fixing

With the roll film tank, after developing the film, it is necessary to rinse it in water before taking out the developing apron and transferring it to the acid fixing bath. All of this can be carried out during the day, if necessary, in the ordinary room with the shades down, provided we wash all of the developer out of our film. Some beginners are under the impression that when the milkiness has disappeared from the film that the fixing is complete, but it is not. The film must be kept in the fixing bath for at least as long again. After that it can be removed from the bath and washed.

It is not advisable to use an acid fixing bath in the ordinary plate tank, because the acid would soon attack the metal. As it is not absolutely necessary to use acid hypo for our plates, we can make up a fresh plain hypo bath and fix our plates in the tank and wash them in it also. This does two things—it eliminates the hypo from the plates and also the tank.

The open tanks for amateurs are generally made of a metal that is acid-proof, as are also the film hangers. We can therefore develop, fix and wash our negatives without removing them from the tank.

Notes and Comment

Reported by Wm. Wolff

Mr. A. G. Cronacher has charge of the McCurry Foto Co., Sacramento. He reports business very good.

Miriam Owen and Sarah Lowe, both with Ing & Allee Drug Co., Sacramento, have fallen off in weight. What's the formula—Miriam and Sarah both looking fine.

Harley Frederick of Sacramento introduced the writer to his very charming wife. (O. K., Harley.)

W. A. Brown has opened a studio at 905 I street, Modesto, Calif. He formerly was in Stockton.

Mose Grady and wife are looking just fine. Getting younger year by year. It's the climate—they're in Seattle, Wash., now.

Don't forget the National Convention of Photographers in Washington, D. C., July 16th to the 21st, and while I am on the subject a word to the California photographers: Join your local state convention at once. We would like to bring the National to the Coast, but must have a strong local association to do so. Write the Camera Craft for particulars.

"Sandy," the service with a smile Kodak dealer of Portland, Ore., went to Washington, D. C., with the Shriners. Mr. Percival also went; he is the manager of the

photo department of Woodard, Clarke Drug Co., same city.

Button & Baker of Eugene are working overtime in Kodak work.

F. H. Hanson of Stockton has recently spent $1000 in changing the front part of his studio. It certainly looks the part. (Great improvement, Frank.)

Holden Drug Co. of Stockton are improving their finishing plant. It is quite up to date.

E. Jacob and Lee Holtzman have bought the Gogings Drug Co., Sacramento, Calif. They were formerly with Frank S. Grey Drug Co. of same city.

Mrs. H. H. Hikok has opened her Colusa, Calif., studio again.

H. Sackrider of Marysville came to San Francisco recently to attend the Photographers' Association meeting. More of our out-of-town cousins should do the same thing. We meet at dinner the second Monday of each month. Get on the mailing list for notice.

San Francisco Museum of Art
Palace of Fine Arts

Photographic Magazines regularly on file in the Seven Arts Reading-room:

Argentine.—Correo Fotografico Sudamericano—Semi-mo.

Belgium.—Association Belge de Photographie—Quar.

England.—Amateur Photographer and Photography—Weekly; British Journal of Photography—Weekly.

France.—Bulletin de la Société Francaise de Photographie—Mo.

Holland.—Lux-Foto-Tydschrift — Semi-mo.

Germany.—Das Atelier—Mo.; Photographische Rundschau und Mitteilungen—Mo.

Italy.—Il Corriere Fotografico—Mo.

Spain.—El Progreso Fotográfico—Mo.

United States.—Camera—Mo.; American Photography—Mo.; Camera Craft—Mo.; Photo-Era Magazine—Mo.

Sweden.—Nordisk Tidskrift för Fotografi—Mo.

The Reading-room is open every day from 1 o'clock to 5, excepting Mondays.

ZOE D. MOORE,
Librarian.

Lehigh University

Bethlehem, Pa., June.—Means to take photographs of the bottom of the ocean or moving pictures of the Lusitania or other sunken ships are being sought in the swimming pool of the Lehigh University gymnasium.

Professor Barry MacNutt, professor of physics at Lehigh University, hopes to simulate the phosphorescence of the waves in such manner that the water beneath the surface may be made luminous enough to permit photography. Experiments will be made in the swimming pool in lighting up under water by spraying with a chemical substance.

Should the experiments prove successful, Professor MacNutt said today, it will be possible for a diver to descend to any depth, use the spray, and then take photographs in the luminous cloud thus generated. At present it is impossible to see more than ten feet ahead at a depth of more than fifty feet, the Professor says, and movies of the "bottom of the sea" must either be made in tanks or taken very close to shore.

Madden with Howland & Dewey Co.

Mr. Paul E. Madden, for seven years with the Eastman Kodak Co., has joined the sales forces of Howland & Dewey Co., 545 Market street, San Francisco. Mr. Madden takes the place of Mr. C. W. Briggs, who has returned to the headquarters at 510 S. Broadway, Los Angeles.

Dates Set for The Emporium Third Annual Photographic Exhibit at San Francisco, California

Summer trips will provide opportunities for taking many prints for The Emporium's Third Annual Photographic Exhibit, to be held September 28th to October 6th, inclusive, this year. Entries may be made up to September 20th.

Amateur photographers all over the country are invited to send their work for the exhibition held at The Emporium, San Francisco.

In addition to the prizes, ranging from $5 to $100, a special competition prize is being offered for the best photograph of The Emporium store building. This structure lends itself well to many photographic

possibilities, both inside and out, having a dome rotunda and other distinguishing features.

This year's exhibit will be held on the first floor of the store, making it more convenient for visitors.

New Building of The Haloid Company

The Haloid Company is doubling its present plant at Rochester, N. Y., having just let contracts calling for a building whose ground area will be 100 feet x 300 feet. Plate reproduced above is the entrance elevation of the new building.

Present production is and has been totally inadequate to meet the demand for Haloid papers, the factory having been operating overtime for months past. It is said that The Haloid Company are now the largest but one of the manufacturers of photographic papers in America. Branch offices are maintained in New York City, Chicago, Boston, San Francisco and Los Angeles. A large and rapidly expanding foreign business is being done.

Officers of the company are as follows: G. E. Mosher, president; E .C. Yauck and J. M. Walmsley, vice-presidents; J. R. Wilson, secretary and treasurer.

Academy of Science and Art of Pittsburgh

At the regular meeting of the photographic section of the Academy of Science and Art of Pittsburgh, the following officers were elected for the ensuing year: O. C. Reiter, President; N. S. Woolridge, Vice-President; S. A. Martin, Print Director; L. C. Rennie, Lantern Slide Director; P. F. Squier, Secretary-Treasurer. **Executive Committee:** C. E. Beeson, F. O. Van Gorder, W. C. Mellor, O. C. Reiter, P. F. Squier.

The Photographic Section is best known to the photographic world as sponsor of the Pittsburgh Salon, held annually during the month of March in the Carnegie Institute, Pittsburgh, Pennsylvania. Plans are now being made for the Eleventh Annual Salon, to be held in 1924.

All communications should be addressed to the Secretary, P. F. Squier, 237 Avenue B, Westinghouse Plan, East Pittsburgh, Pa.

A wedge of intelligence struck by a blow of well-directed energy soon shatters the rock of opposition.—The Vulcan Bulletin.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St. Berkeley, Calif.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Stereoscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

ALBUM DIRECTORS

Eastern Division, No. 1: Under the direction of Chas. F. Rice, P. O. Box 245, Mamaroneck, N. Y., comprises New York, New Jersey, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, Delaware, Virginia, West Virginia, Kentucky, Indiana, Ohio and Michigan.

Western Division, No. 2: Under the direction of P. Douglas Anderson, Room 413 Claus Spreckels Bldg., San Francisco, Calif., comprises California, Oregon, Washington, Idaho, Nevada, Utah, Montana, Wyoming and Colorado.

Southern Division, No. 3: Under the direction of Frank Reeves, Stamford, Texas, comprises Florida, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, and Arizona.

Northern Division, No. 4: As yet there has been no director named. Prints for this division should be sent to Chief Album Director Louis R. Murray, 927 Ford street, Ogdensburg, N. Y. This division comprises Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota and South Dakota.

NEW MEMBERS

5255—O. K. Wiandt, Covington, Ind.
Up to 3¼x5½ D. O. P. and P. O. P. of scenes and miscellaneous; for the same. Class 1.

5256—C. L. Chafee, 114 Wilson Ave., Columbus, Ohio.
3¼x4¼, 3¼x5½ contact prints or 5x7 and 8x10 enlargements. Azo for contact, P. M. C. No. 9, Portrait, Bromide, Carbon black enlargements; of close-ups of animals, character studies, cyclone scenes, and pictures of general interest; for animal pictures, mountain scenery, historical or anything interesting. Class 1.

5257—Victor C. Otto, c/o The Photo Shop, Egg Harbor City, N. J.
Up to 5x7 Azo, Artura, etc., of landscapes, marines, and subjects of interest; for the same. I desire to exchange only post card views. Class 1.

5258—Ed Pistorius, Essential Oil Factory, "Aromatica," Soemedang, Java.
9x12 cm. gloss and matt of hunting, fishing, river scenery, mountain, landscape views and anything of general interest. I desire also to exchange lantern slides. Correspond in English, Dutch and Malay. Class 1.

5259—W. Ernest Smith, 16 Pevensey Road, Eastbourne, Sussex, England.
3¼x4¼ and larger sizes, double-weight bromide, of scenes of English town and country life; for American town life, beach scenes, also nudes and girl studies. Class 1.

5260—Frank A. Ruth, 109 No. Nice St., Frackville, Pa.
Class 2.

5261—Frank Patterson, P. O. Box 721, Medford, Oregon.
All sizes, D. O. P. of lantern slides of Western scenery, nudes; for the same. Class 1.

5262—James Gillidett, Plains, Kansas.
Class 2.

5263—Charles M. Holland, 114 Perry St., New York, N. Y.
3¼ x 5½ Noragas printing paper, of commercial and scenery pictures; for the same. I desire to exchange only post-cards. Class 1.

5264—F. W. Varta, 1309 So. Komensky Ave., Chicago, Ill.
4 x 5 Azo and Glossy, of starved rock scenes and outdoor life; for anything of general interest. Class 1.

6265—Alec Blackie, 12015 91st St., Edmonton, Alta., Canada.
Class 2.

5266—Harry H. Hutley, Post-Office, Windsor, Nova Scotia, Canada.
3¼ x 4¼, 5 x 4, 7 x 5, and enlargements of landscapes, water views, natural studies and flower work; for sunsets, evening pictures, any class of landscapes. Class 1.

CHANGE OF ADDRESS

2285—Chas. A. Holman, R. F. D. 1, Box 833, Oakland, Calif. (Was 7850 Foothill Blvd., Oakland.)

4712—John W. G. Winkler, 1821 Lincoln St., Denver, Colo. (Was 1506 Oak St., Little Rock, Ark.)

4726—B. C. Eddy, 803-52nd St., Oakland, Calif. (Was 625 Central Bldg., Los Angeles, Cal.)

4745—Carl W. Beese, 146 Market St., Hamilton, Ont., Canada. (Was Fenwick, Ont., Canada.)

4911—E. J. Darling, 102 Franklin St., Riverside, N. J. (Was Lansdale, Pa.)

5192—J. H. Imhoff, Santa Paula, Calif. (Was 1305 E. Madison St., Portland, Ore.)

5197—E. H. Magee, c/o Mrs. J. E. Porter, 66 W. 134th St., New York, N. Y. (Was 5 East 135th St., New York, N. Y.)

RENEWALS

4979—Herbert Hiecke, 4511 Dearborn St., Chicago, Ill.
2¼x3½ Azo, Velox and Cyko of landscapes, marines and buildings; for landscapes, old ruins, mountain scenery, animals, birds and notables. Class 1.

5189—Geo. F. Hogan, 220 West 69th St., New York, N. Y.
3¼ x 4¼, 9 x 12 cm., 3¼ x 5½, and 4 x 5 Velox, Azo, Seltona, and bromide of architectural, monumental, Naval (U. S. and foreign) Marines, events, N. Y. city highways and byways; for same. Class 1.

5192—J. I. Imhoff, Dimoneira Ranch, Santa Paula, Calif.
3¼ x 5½ of scenes of the Northwest and California; for anything of interest. Class 1.

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A Photographic Monthly

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CONTENTS FOR AUGUST 1923

Cover Design—Mt. Hood, Oregon.....By W. R. Potter
San Francisco from Telegraph Hill (Frontispiece)....By William David Rawling
I The Ideal Photographic Printer.....By J. G. Pratt 355
The Third Dimension.....By R. L. McColm 360
II Newspaper Photography.....By L. G. Rose 362
Elimination of Halation in Diffused Projections.....By A. J. Rich, Jr. 369
Drawing in Pen and Ink from Photographs.....By William S. Rice 371
Something Big in Projection..... 376
A Night View.....By Jos. O. Hickox 378
Emergency Labels.....By R. L. McColm 378
Desensitizing in Its Commercial Aspect.....By A. C. Banfield, F.R.P.S. 379
F 4.5. Service from an F 7.5 Lens.....By Wm. D. Rawling 382
Non-Staining Bottle Labels.....By R. L. McColm 383
Vertical Stand for Reproduction Work.....By Max Henry Ferrars 384
Forthcoming Exhibitions, 1923..... 385
Editorial..... 386
Pictures with Bronze or Silk.
For the Professional..... 387
Meeting of Photographers' Association of California.
The Amateur and his Troubles..... 390
Outdoor Portraits and Backgrounds.
A Photographic Digest..... 393
Variety of Tone in Sulphite Toning—The Light and its Master—Rolling Inking Bromoil Prints.
Club News and Notes..... 396
Art and the Crafts..... 397
Our Book Shelves..... 399
International Photographic Association..... 401
Notes and Comments..... 402

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WILFRED GIBSON, President *Victoria, B C., Canada*

"THE SMOKE OF DISASTER ROLLED WAY
BEHOLD OUR CITY OF TODAY"

By WILLIAM DAVID RAWLING
San Francisco, California

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
EDGAR FELLOES, Associate Editor
P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX AUGUST 1923 No. 8

I. The Ideal Photographic Printer

Copyright J. G. Pratt, 1923, Washington, D. C.

With Illustrations by the Author

Every man in every walk of life has some one thing in his shrine of possessions of which he is unduly proud: his watch is accurate to the very second; his pet collie has never been duplicated in the matter of intelligence; perhaps it is his wife's cooking; but if that man be a photographer poor wifie doesn't stand a show for it's his printing machine, which is the fastest and the very latest thing in the profession. And as you readers are all photographers, I would like to introduce to you a homemade printer which, if you will but give it a fair trial, will have all the other fellows green with envy and snooping around to get your specifications.

You can knock it together in a couple of evenings, and the whole outlay in cash will not exceed ten dollars at the most. If you have broken into the game of kodak-finishing, you can run these off with ease at from one hundred and fifty to two hundred an hour, and you can print away for a whole evening and unless you run across several negatives in succession that are so dense you have to hold the light on for a minute at a time,—the plate glass of the printer will not get so much as warm. You can slow it down for portrait work, and where the print requires shading, there isn't a single part of the negative that you can't hold back or print out at will, and in this respect the printer is entirely original and the only one the writer has ever seen on which shading could be done quickly and satisfactorily.

But we are getting ahead of the story, for this number must be restricted to the actual construction of the machine, and you will have to wait for the next issue for a description of the shading processes.

The Table

It is probable that you already have a table that will answer the purpose, at least two feet wide, the length being immaterial, which can be

converted into the printer, and if not, it will be an easy matter to construct one. Two twelve-inch dressed boards will do for the top, although they should be properly braced underneath to maintain a clean, flat surface. The braces should not, however, come closer than six inches to each side of the 5x7 or other opening which you will cut for the well of the printer.

This machine is best operated from a sitting position, and the height should therefore be regulated according to one's individual needs. Thirty-one inches is the correct height in my own case, although tall fellows will perhaps prefer it somewhat higher. The length should be at least two feet six inches, and if made a foot longer, the adjustable extension seen in the diagram will not be necessary.

The writer uses both 5x7 and 8x10 printers, built after this plan, but as the 5x7 size will probably accommodate the needs of most of our readers, the specifications given will be restricted accordingly.

Before you attempt to cut the 5x7 opening, all the requisites for the various parts should be gotten together, and measure made for each as you come to it. You should first decide upon the size of the bulb you will require in your special line of work.

What Bulb To Use

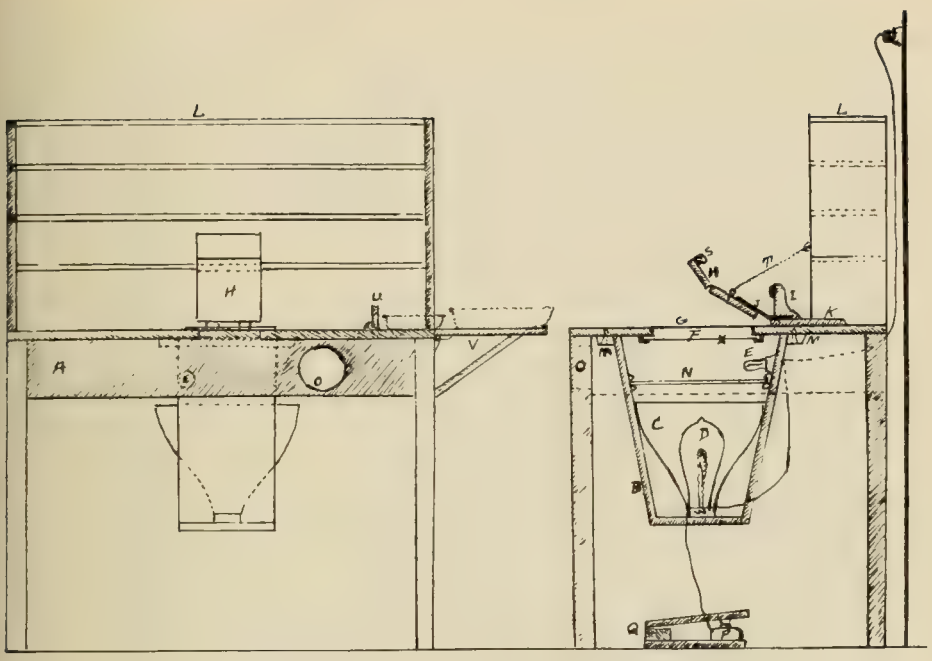
If you use Haloid Rito, velox, or other fast papers, or if you do mostly portrait work, or if in any event speed is not a requisite, a 150-watt nitrogen-filled bulb will answer all your needs, and this will take the regular socket. For fast kodak-finishing, however, using Azo, Kalo, or other of the slower grades of paper, a 300 and preferably a 400-watt bulb should be used, and this takes the larger or Mogul socket. In either case this outfit will print average kodak pictures in from one to three seconds, and if portrait work is being done with Artura, Old Ivory, or any other of the finer grades of paper, the light can be slowed down as much as desired with tissue paper or an extra ground glass.

Desiderata

The main requirements are about three feet of pine or other lumber, eight inches wide by one-half inch thick; a ten-inch porcelain-lined metal reflector of the shape indicated in the drawing; the nitrogen-filled bulb and a socket for the printer and a 10 or 12-watt lamp and socket for the pilot light; a dependable floor (or door) switch, the one made by the General Electric Company and marked "5A250V-25A500 VSP" being the most satisfactory; a pair of hinges with a swing of from one and one-half to two inches; and the top out of one of the better class 5x7 printing frames.

Construction

You can now proceed to put the machine together. First, make the lamp frame, using the eight by one-half inch board above referred to, but with an inch board at the bottom to give more firmness. Have it fit the



FRONT AND SIDE VIEW OF PRINTING TABLE

reflector snugly, slanting somewhat toward the bottom, and of such depth that at least six inches clearance will be given between the bulb and the top of the table. The frame can be held together temporarily by two wires, or by cross strips as seen in the photograph of my 8x10 printer. At the top of the frame should be cross pieces, ten inches long with screw holes on each end for fastening the frame to the underside of the table, as indicated at (M). Runners should be made to hold ground glass (N) at a point about five inches beneath the undersurface of the table. This will allow ventilation for the reflector, and at the same time will give sufficient room for hand manipulation in shading your prints, as will be indicated later on. If tissue paper shading is to be resorted to, and this is often desirable, another runner should be placed either on the lamp frame, or on the underside of the table to hold a sheet of clear glass, indicated at (F).

You are now ready to cut the opening in the top of the table. Hold the lamp frame in its proper place and as close to the front of the table as possible, and take your measurements as to just where the opening should be made. This can be done by boring a hole in one corner, and using a small keyhole saw, which can be purchased for about half a dollor. Make the opening a clean 5x7 cut with as square edges as possible, and if you use a 5x7 plate glass, an eighth-inch ledge can be tacked around to hold it just flush with the surface of the table, or at least, not depressed as difficulty would be encountered in sliding off the prints and negatives

after the exposure. It is preferable, however, to obtain a plate glass somewhat larger than the opening, and countersink it to the proper level.

The lamp frame can be located in its proper position by looking down through the opening and centering the bulb, and when this has been established, pilot light (E) should be set just clear of the left side of the opening. A yellow bulb can be used for this purpose, or a white bulb with orange cloth (to be had at any photo supply house) dropped alongside to keep the white rays from the sensitive paper.

The Printing Top

Considerable care should be taken in fitting the top (H) in order to give it perfect contact. The cloth already on the printing-frame top answers fairly well, but much better contact can be had by gluing onto this a piece of one-quarter inch felt; allow it to dry under slight pressure; and then slit the felt at the joint. A board should be fitted at (K) to take the hinges at the proper height, so that when the top is brought down the felt will meet the glass at every point. The hinges should be rather long, and so placed to give a clearance of from one-half to an inch at (J). This permits the top to be thrown absolutely clear of the further end of the opening when it is released and drawn back. (T) is a spring to draw the top back automatically after the exposure has been made, and (I) is a bumper to prevent it's going back too far. It should be remarked here that although the writer has tried all sorts of springs in this connection, none have been found that worked quite as satisfactorily as a double thickness chain of eighth-inch rubber bands, just long enough unstretched to reach from the top, when it is up, to the fastening. These bands can be used for months, and when one does break it is easily replaced.

Using Glass Negatives

This printer is best adapted to film work, but glass negatives can be used with perfect satisfaction by having an extra plate glass slightly thinner, to allow for the thickness of the negatives. If plates are to be used exclusively, however, the top can be set accordingly.

Another method, instead of countersinking the plate glass in the table itself, is to cut a 5x7 opening in a piece of half-inch board of the proper size, to take all the working parts of the top, and screw this into place, as seen in the photograph. This is readily detached and is much more accessible for adjusting the top to give perfect contact.

A handle, such as a piece of moulding, should be placed across the front of the printing top to enable a firm and quick grasp in bringing it into contact, and this requires no pressure other than the weight of the hand.

Shelves can be placed on the back of the table to suit one's needs, though if commercial kodak finishing is to be done, ample space should be made for all the various grades of paper to be used.

THE COMPLETED PRINTER

The Floor Switch

There are various kinds of floor-switches (or door-switches as they are sometimes called) but most of them burn out in from three weeks to six months. The kind enumerated above, however, seems to be a permanent affair as the writer has been using two of this type continuously for something over three years, and they have never failed. The switch costs about a dollar and a half, and if your electric supply man does not carry it in stock, he will order one for you. Be sure to ask for the kind that makes contact when the button is pressed down. Fitting this on a block, as seen in the diagram at (Q) is so simple as to require no further explanation. However, if the switch button does not protrude sufficiently a half-inch plunger can be fitted on the underside of the foot-board in order to press it down to where it will make the necessary contact.

The Handhole

A handhole, at least four inches in diameter, should be cut in the front of the table at the right side of the printer, as indicated at (O), for the insertion of the hand in dodging; an upright section about three

inches high should be fastened from front to back, as indicated at (U), to prevent any slopping which might come from the developing trays; and if desirable, a hinged extension can be made at (V) to hold the trays. When this has all been done we are ready for the wiring and the coat of varnish.

Wiring

Secure a sufficient length of heavily insulated flexible cable to reach from the switch through the two bulbs to your wall socket. The cable goes to both poles of the pilot light, which is always lighted while the wall socket is in; thence to both sides of the large bulb; and thence to the switch, which allows the large bulb to be lighted only when you press down with your foot completing the circuit.

This completes the construction of the printer, and another chapter will be given next month on its operation and the various tricks in printing, speed work, and dodging negatives which heretofore have seemed impossible on account of dense highlights or extreme shadows.

The Third Dimension

By R. L. McColm

In photography with one lens we get but two dimensions: Length and Breadth in our finished print. To get the third dimension, Depth, we must resort to Stereoscopy and its attendant expensive, double lens camera, usually odd size, unobtainable plates; the complications of transposing the pictures in printing; matching prints as to time and exposure if we wish to avoid the transposing process; and lastly, the use of the cumbersome stereoscope.

It seems odd that so few persons know that we can obtain this third dimension, Depth, without the use of any special apparatus, either in taking our pictures or finishing them.

Try this: Select a good sharp print, preferably one in which there is distance with a principal object in the foreground for comparison. Hold the print at the usual viewing distance, under a good light and close one eye while viewing it. After a second or two the third dimension will assert itself. The picture will take on a rounded, stereoscopic effect and you will see the depth and distance and that subtle "liveness" of a true stereoscopic picture, viewed through a stereoscope. Try it! You will be astounded at the wonderful effect.

Stereoscopic movies! Just view your next movie show with one eye and you will have a hitherto unknown treat. Just note the wonderful difference between the "flat" view as seen with two eyes and the deep round view obtained with one eye.

The explanation of this apparent phenomenon is simple. The picture was taken with one lens (the camera) and if viewed with one lens (one

THE CLIFFS OF MOSES COULEE. By W. H. Nitschke

Showing rugged cliffs of the Coulee and former course of Columbia River

eye) we get a reversed effect of the flat image which two eyes show us. Two eyes can see around objects to a certain extent, owing to the pupilary distance of the human eyes, but in viewing a flat print two eyes tend to accentuate the flatness as there are no corners to see around, while one eye roves over the picture to take in the details and in doing so gives the illusion of peering around corners. The illusion is caused by a continual movement of the eye from point to point in the picture and hence the stereo effect.

The reverse of this action is very, very helpful in posing a subject or composing a view. When you wish to photograph what looks to be a beautiful "picture" in nature, look at it with one eye. This flattens out the view and gives us approximately the same perspective as that seen in the finished print with both eyes. Just remember that any view that looks good with one eye in nature, will look good with two eyes in the finished print. By observing this little "kink" you will find that your composition and posing of subjects will be simplified, your pictures will improve, and your expenses for materials will decrease.

But before you do anything else, just look through this copy of "Camera Craft" and view the pictures with ONE EYE!

II. Newspaper Photography

By L. G. Rose

With Illustrations by the Author

There are many types of flash guns on the market but probably the one most used by newspaper men is the Caywood gun, although many carry the "Imp" or some automatic gun of that type, — one that will release the shutter and fire the flash simultaneously. An objection to the "Imp" gun is that it uses caps which means another operation and, oftentimes, the time necessarily taken in the placing of a cap means a good news picture gone wrong. However, one good shot with an automatic gun is enough ordinarily, the difficulty coming in the operator firing too early or too late. It reminds one of the old Continental Army slogan "Don't shoot until you see the whites of their eyes."

There have been many serious accidents just recently to news photographers, entailing loss of limb or life through the improper handling of flash powder. In one particular case, the hand protector of the flash lamp was smouldering, and when the photographer spread the powder on the tray for another exposure an explosion occurred, which took away his hand, and the broken bottle pierced his body in several places. No matter what the story, nor how important, the operator should not lose his head, figuratively or literally, in handling flash powder. There is a large amount of fast powder used. Personally, I prefer to use a normal powder, although I occasionally get a closed eye, but this can be easily fixed by the art department. However, I do not get as much smoke, and the danger is not as great as with the fast powder.

Some of the extremely fast powders can be set off by concussion, which means that if a bottle of it is dropped there is a possibility of a bad explosion. Never load a flash lamp from a bottle containing more than half an ounce of powder. Better still, carry your powder in a wooden box. Also, do not allow stray caps and loose powder to shake around in the bottom of a grip. There have been some serious explosions resulting from that, too. One photographer has a badly-crippled pair of legs through that very cause. His grip containing camera, flash and caps struck against a partition, and when the smoke cleared away he had only the handle of the bag in his hand and most of the broken glass bottle in his leg.

Occasionally it becomes necessary to use quantities of flash powder outdoors at night, when still more caution must be exercised in its handling. If more than an ounce and a half of flash powder is to be used on a single shot, under no circumstances use a hand gun. I have known operators to use four or five ounces and get away with it, but the chances are against you. Put it in an open pan on a step ladder or similar support, for there is a great possibility of the lamp itself going to pieces. Not only

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Photographers and Reporters Mob Lord and Lady Astor

Cameramen and reporters subjected the first British woman M. P. and her husband to a barrage of questions and snapshots as the Olympic docked. Lady Astor discussed all sorts of questions from women's dresses to the Genoa Conference, morals, prohibition, women in politics, etc.

that, but especially in damp weather, the powder may cake and fly over on to the operator, and it is next to impossible to put a fire of that kind out until a serious burn has resulted.

The developing of news negatives has to be done with considerable speed, and the kind of developer to use is a good deal a matter of personal choice, although it is always best to follow the plate or film maker's formula, using a developer somewhat stronger than would be used for portrait negatives, as strength and contrast are what is needed. I believe there is more metol-hydrochinone developer used than any other for this class of work. It does not give a wonderfully good negative to look at, but seems to give a negative that answers the purpose and will work well in tanks. Much of this work is done by fast tank development—three, four or five minutes, and it has the advantage that the developer is always ready, and the plates or films are slipped into a holder, then into the "soup," as it is called, and as soon as developed can be transferred to the hypo in the same hanger.

For those who want a formula for Pyro, one that will give good printing negatives, and with plenty of speed, is the following:

A

Water	1 Gallon
Potassium Meta-Bisulphite	200 Grains
Pyro	4 Ounces
Bromide	½ Ounce

B

Water	1 Gallon
Sodium Sulphite	4 Ounces
Sodium Carbonate	4 Ounces

To Use

A	4 Ounces
B	4 Ounces
Water	8 Ounces

In dull weather and for outdoors sports, fast exposures, etc., use full strength, that is, add no water.

For a fixing bath the white alum bath is preferred, using sulphite, acetic acid and potassium alum and hypo. Occasionally, especially in making speed shots, such as sports, it becomes necessary to intensify negatives, and an intensifier for this purpose is made as follows:

Water	12 Ounces
Potassium Iodide	1¼ Ounces

Thoroughly dissolve and add 8 ounces saturated solution of bichloride of mercury. If the solution is now a salmon pink color and remains so after persistent stirring, add a few more crystals of potassium iodide, and when the solution is clear, or a light green color, add one ounce of hypo crystals, and it is ready to use.

To use, the negative must be thoroughly fixed and then washed a little and immersed in the intensifier, when it will immediately take on density and color. This intensifier can be used either locally or all over. The negative will gather more color when it is put to wash after intensification. If you should get too much intensification, put the negative back in the fixing bath, which will cut it back. This is an old formula, and has been a life saver to many newspaper and other photographic workers.

Then, occasionally, you will have negatives that are too strong and have to be reduced wholly or in part. About the best reducer is that old standby, Farmer's Reducer, which is made as follows:

Hypo Crystals	1 Ounce
Potassium Ferricyanide (Red Prussiate Crystals)	1 Ounce
Water—8 to 16 ounces, according to the strength and speed of reducer desired.	

This reducer will be a light yellow or straw color, and its strength can be told a good deal by its color. A negative can be brought right ou

MOSES COULEE. Copyrighted by W. H. Nitschke
The ancient watercourse of the Columbia River, now fertile farming lands

of the fixing bath, given a slight rinse, and immediately put into this reducer, and, when reduced sufficiently, should be rinsed and returned to the fixing bath to clear it of any possible stains.

The making of newspaper prints nowadays is nearly all done by projection or enlarging. Of the various types of enlarging machines in use, many of them are equipped with an arc light, others with Cooper-Hewitt "M" tubes, and then there are the new projection printers of the vertical type, such as Eastman's.

The enlarging machine using the arc light when equipped with condensers, is very fast, but there is the continual trimming of carbons, the centering of the light for the condenser, and there is also considerable heat generated by the arc, which is highly objectionable when printing from wet negatives—and nearly all news negatives are wet when printed—also, this type of negative is very seldom left in the fixing bath long enough to become thoroughly hardened, so it does not take much heat to melt it. But, on the other hand, such enlarging machines as the arc and condenser type will enable the operator to get much better prints from all classes of negatives, as we can then use the chloride as well as the bromide papers. Inasmuch as many of the news negatives are made under great difficulties and are not always technically good, the great range of chloride papers, from the extreme contrast to the soft, with the addition of the bromide papers, is a wide and extremely desirable selection from which to choose.

It must also be remembered that a paper such as Azo soft becomes quite contrasty when used for projection prints, and a paper like Azo, hard X, or No. 4, represents extreme contrast when used for projection work.

Some enlarging machines utilizing the arc lamp are not equipped with condensers but with a reflecting cone. This kind of an outfit has considerably less speed than the one with the condensers, but there is not nearly as much trouble with the light being out of center.

The next type of enlarging machine—the Cooper-Hewitt "M" tubes—has no condensers, using only a flashed opal glass for light-diffusing, and is plenty fast enough for bromide paper. There is not much heat generated by it, and all in all it makes a very satisfactory outfit.

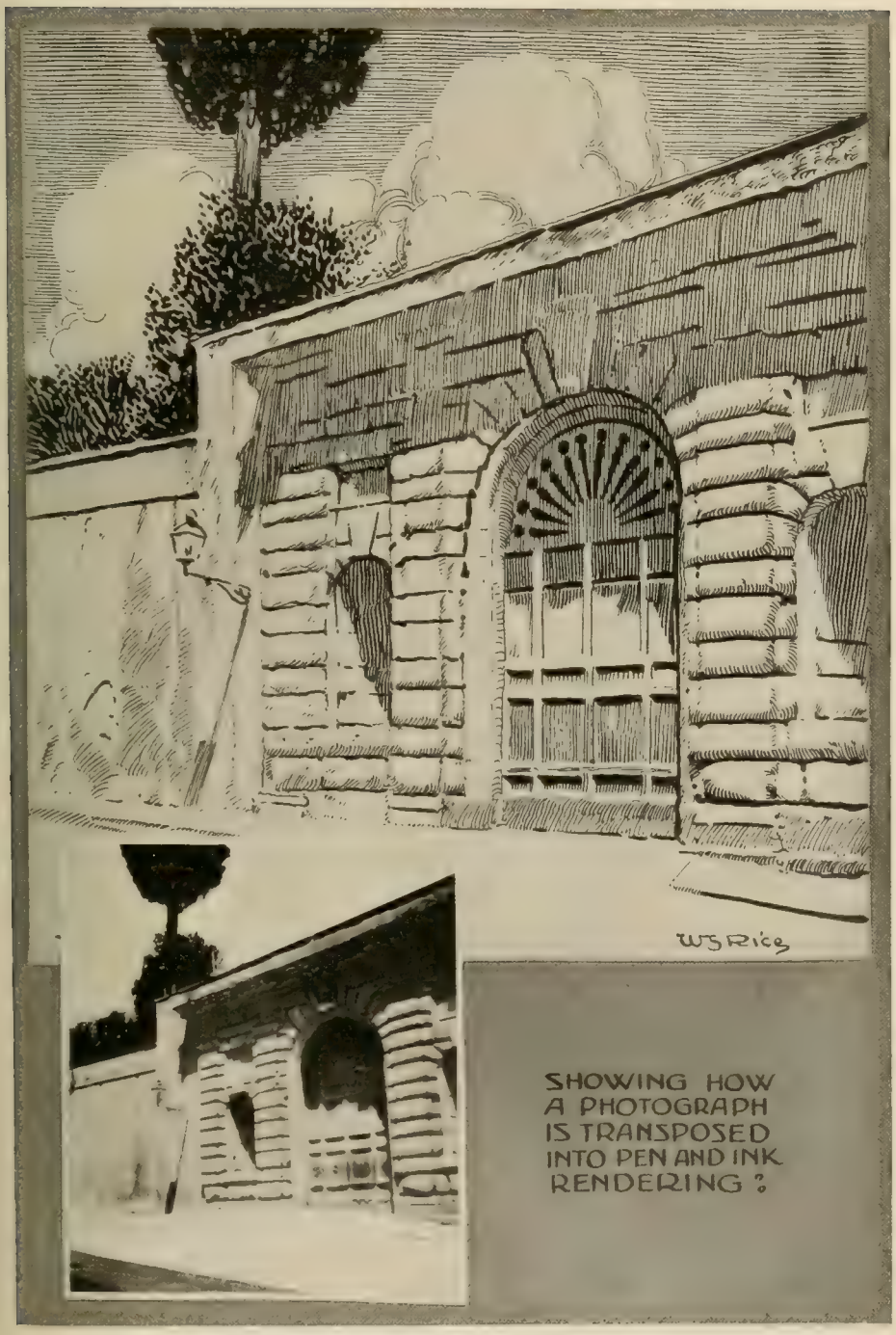
An outfit that is becoming extremely popular is the vertical type of enlarging machine using lights of the incandescent variety. Several of the large newspapers have whole batteries of these machines, one for each operator. They are extremely handy, as they are always in focus, but some method has to be evolved to do away with the heat generated when printing from negatives, and several of them that I know of have been equipped with small electric fans.

A few words about the enlarging easel or board itself. Some newspaper plants require their prints to be a certain definite size, such as two columns, three columns, etc. This method has several advantages where speed is essential. It enables the photo-engraving department to collect a lot of photographs and make them on one large plate, which can then be printed on one large sheet of zinc with but one operation. Then, again, other newspapers require all prints to be made much larger than the final cut. While, for real results, this is much the better system, it works a handicap on the engraving department, as it involves a separate reduction of each print.

To get back to the easel. For a newspaper using the first system, the easel is laid off by lines representing columns, enabling the operator to tell instantly if his projection is the correct size. For the other system, the operator simply throws the image up to fill an 8 x 10, 10 x 12, or 11 x 14 sheet of paper, and lets it go at that.

Now comes that old question—What kind of prints do they want? There is only one answer, and that is what you really know is a good print. That is all; but take into consideration that the half-tone screen acts with a softening effect on a print. Therefore, your print must be rather contrasty, with all detail, and by all means it must be sharp and fully developed. In other words, the requirement is that it must be a good clean, sharp and brilliant print.

Most newspaper photographers have their own pet paper "soup" or developer. The following formula is much used by one of the large news services, and has proven extremely satisfactory, being very economical on chemicals:



Illustrative of William S. Rice's article on page 371

Hot Water	About 2 Gallons
Metol	5 Drams
Hydrochinone	4 Ounces
Sodium Sulphite	15 Ounces
Sodium Carbonate	22 Ounces
Potassium Bromide	1 Ounce

Thoroughly dissolve each chemical in warm water and add in the order given. Then fill the bottle to five gallons with cold water. Use full strength.

Best results are attained if the exposure is timed so as to be fully developed at the end of two minutes.

A fixing bath for this kind of work should not be over 60 hydrometer test before adding the hardener. If the fixing bath is too strong when new, it will cut the prints back, especially in the high lights—something to avoid.

Prints are not fixed very long, and under ordinary rush conditions are washed still less, then blotted off, identification written on the back with an indelible pencil, and they are then on their way to the department for which they are destined.

Nearly all prints are made on glossy paper, although some of the newspapers where they make large prints retouch them and then reduce them down again, prefer semi-matte bromide. But the latter are in the minority. There is considerable discussion as to whether paper with a "Pence" base or that with a white base gives the better results. In the P. M. C. line of papers, No. 4 is the "Pence" and No. 1 is the white. The manufacturers themselves claim that the best results for reproduction are obtained on the No. 4, and I think there is more of that used, although the prints on the No. 1 or white stock look far better to the eye.

There is some contact printing done around most newspaper plants, and in such cases the chloride contact papers are usually employed.

Many times during my connection with newspapers, advertising agencies and my work as a commercial photographer, I have seen photographers with what they think are wonderful news shots, and who would rush to the newspaper offices, only to be disappointed because they were not used. Why were they not suitable? Just a collection of people looking at the camera does not make a news shot. A photograph for a newspaper must have news interest, be timely, and the real, ideal news picture tells the whole story, or at least a certain highlight of the story at a glance. What the modern newspaper wants, to use their own words, is a close-up picture that will "knock 'em dead."

Elimination of Halation in Diffused Projections

A. J. Rich, Jr.

With Illustrations by the Author

It might safely be stated that for the past few years, portrait photographers have almost universally accepted diffused effects, as to the artistic and natural method of creating a pleasing likeness of their subjects.

The usual methods of procedure are as follows: Either making the original negative thru a soft focus lens, or making a sharp negative and diffusing the print by projecting the image thru a soft focus lens.

The last given method seems to be the one used by the majority of studios, due to the fact that there is a certainty in the results secured when working with a fully corrected lens; as compared to the uncertainty of the results when a soft focus lens is employed, due to the difficulties of diffusion interfering with the true focus and halation appearing that was not noticeable on the ground glass. My article, therefore, pertains to a method by which sharp negatives may be projected thru a soft focus lens, securing almost any degree of diffusion, at the same time eliminating unsightly halation from the print.

When a sharp contrasty negative is projected thru a soft focus lens, the given object to focus on has always been accepted as the catch light or pupil of the eyes, but by this method, if there happens to be a high light on the margin of the cheek or neck, halation is bound to appear at this point in the finished print. To overcome this defect, the following formula will, I believe, prove very effective and the result obtained positive.

This method which I have thoroughly tested, is a simple one and has not only entirely eliminated halation, but permits me to work with my soft focus lenses (Verito or Smith) at full aperture. The procedure is as follows: Instead of focusing upon the pupil of the eye, focus upon the most contrasty part of the negative. In a portrait, this area will usually be found where the margin of the cheek meets in sharp contrast against the background. Take this area as the part to be focused upon and if the projection lens (soft focus) is racked back and forth, you will notice a light line of halation creep from the background, into the flesh margin. Keep on focusing until this line of halation has been eliminated from the flesh margin and brought back into the background area. While doing this, pay no attention to the sharpness of the entire projection but concentrate entirely upon eliminating the aforementioned line of halation, so that the flesh and the background meet in as sharp a line as possible, with the line of halation entirely eliminated. When your projecting lens

Focused for sharpness at cheek margin.
Diffusion is obtained without halation.
(Verito F.4)

is racked too far forward, the light line of halation will be in the flesh. When racked too far back, a dark line of halation from the flesh will appear in the background. But, by finding the exact point of focus where the lines of halation are entirely eliminated, your focus will be correct and you are ready to make the exposure upon the sensitized paper.

In the developed print, you will find that the eyes and all other important points, such as the high lights, etc., have taken care of themselves, and halation will have been entirely eliminated.

After prolonged experiments in securing diffusion thru the medium of bolting cloth, screens, etc., I have found that the diffusion rendered in this way is not of a desirable quality, furthermore, the entire tone value of the print is flattened and instead of securing true blacks, the result is a dark gray. Another method of procedure is throwing the sharp negative slightly out of focus to obtain a diffused print. But, by this method, dis-

tortion is always noticeable. Usually, the pupil of the eye will be thrown into the lid and other unnatural expressions obtained.

Probably, any photographer who has obtained diffusion in his negatives by both the method of diffusion in the enlargement or making the original negative with a soft focus lens, will agree that the quality obtained thru the latter method is far superior, mainly for the reason that when the negative is made thru a soft focus lens, no plane of sharpness is noticeable. But, a photographer can not afford the uncertainty of the result secured by this method, as it is often difficult to obtain another sitting by the subject. As the layman can not discern the difference in the resultant print, it is far safer to diffuse when the projection is made.

Another point well worth remembering is that a soft focus lens should always be focused with the diaphram aperture set at the stop with which you intend to make the exposure, as the focal length changes decidedly, relative to different apertures.

Drawing in Pen and Ink from Photographs

By William S. Rice

With Illustrations by the Author

Courtesy of "The School Arts Magazine"

To draw from a photograph is by no means as easy as it looks. The reason for this is obvious. The main thing that you must keep in mind when working from a photograph is that you must study it closely and interpret it rather than make a literal copy of it.

You must put yourself in the camera's place, and think how your subject would have impressed you, and how you would have rendered it without a pen or pencil to record your impression.

It is only after years of sketching from nature itself, out of doors, that one is really qualified to properly interpret a photograph. This sounds like an exaggerated statement; but remember that the camera is merely a recorder of facts and that its records are literal translations of nature. "The camera never lies," is an old saying, but anyone who has taken photographs and compared the prints with nature will sooner or later, find out to his amazement, that color values are invariably rendered falsely. Then, too, perspective is frequently distorted by the lens, which proves how unreliable the photograph is when taken too literally.

Another difficulty to overcome by the student in working from photographs is to subordinate detail and get the spirit of the subject. This is because the photograph is confusing; it buries the main motive of the scene in a mass of unessential details. The camera takes in, in an incredibly short time more detail than the human eye can see in a day. Right here then, we have a good argument for using the camera as an aid

Focused for visual sharpness of eye. Notice halation at cheek margin, high lights and whites of eyes. (Verito F.4.)

Illustrative of article on page 368

in gathering facts in special subjects as rapidly moving objects, animals in action, crowds of people, or details of architecture that may be studied more leisurely from the photograph.

With all this wealth of material to work from however let us never lose sight of this fact that the subject is not an impression but a record of numerous facts from which you must select the center of interest.

For furnishing a subject for the simple rendering of textures or for studying color values, the photograph is very useful. You may often find good photographs of stone walls, trees, grass, running water, marine views and many similar effects; effects which might be difficult to obtain out of doors at the desired time. Careful pencil or pen studies of these photographs will greatly facilitate much more advanced studies from nature which you may make afterwards under more favorable circumstances.

You may readily see then how necessary it is to draw correctly and to have much knowledge behind the correct drawing before you dare use photographs at all. To translate the stone wall, the rough plastered surface of a house or the shingled roof and foliage nearby, which a photograph may give us, into a similar texture in pen and ink lines is no small work. Without some previous knowledge of the difference in textures, based on accurate study, it is well nigh impossible; but given some study of this kind, however, and the photograph often helps much farther along the same road.

It is interesting to note how differently people interpret the same photograph. There is no special method for this work, save that of simplicity, and the purpose of calling attention to its present treatment is merely to show how one must often depart from the original photograph in order to get the effect of it. In pen work it is always the best plan to begin work only with the shadows and shadow sides of objects leaving all the lights to be considered last. In this way it will soon become apparent how little detail is needed after the main shadows are expressed; while if the case is reversed and the light sides are considered first, there is apt to be so much elaboration of detail that all contrast of light and shade is lost by the time you turn your attention to the darker sides.

Certainly the photograph has had a great influence on the art of today, and to men who have been strong enough to perceive its truths, and not to become imitators of its array of commonplace and surface details, it has been an aid and inspiration. It has done away with numerous conventionalities of actions in pictures of men and animals, and has broadened our ideas of composition and the distribution of light and dark.

The photograph, which reveals to us many new aspects of nature, has done its part toward the production of really great works. Another service the photograph has rendered the artist is an indirect one, and yet may be mentioned here—it has educated the people by its countless reproductions of the great works of the masters. If the photograph had done nothing else for art, this alone would be an inestimable service.

In the sketches which accompany this paper, you will see by comparison with the photographs from which they were taken that the contrasts of light and shade are rendered with much more distinctness than in the photograph; even at the frequent sacrifice of color.

You will observe too how the buildings lean in the one photograph due to the operator not holding the camera level, and how it was necessary to correct this distortion in the drawing.

Another point that you must consider is the numerous spots in a photograph of equal darkness. If you render them just as they are, your picture will lack a center of interest. You must select the spot that interests you most and render it strong and dark and keep other darks relatively lighter. That is the subordination of all darks or solid blacks to one spot near the center of the picture, must be felt in glancing at the picture,

otherwise the eye flits from one spot to the other and never finds any spot upon which to rest.

The preliminary pencil drawing is done with a medium hard pencil H.B. on a sheet of bristol board "kid finish" preferred. After the subject is carefully laid in and the principal shadows as well, you are ready for the inking. Use India ink and draw in the shadows with a No. 404 Gillott pen, first and a small brush (camel's hair) No. 4 which you may use to spot in boldly such places like accents and the deepest darks. After the shadows have been carefully rendered, there is really little else that need be done except the suggestion of pattern or of the color values in the light areas. For these I use a No. 170 or No. 303 Gillott pen. The safest rule to follow in rendering with the pen is: "Let your lines follow the direction that the surface follows rather than the shadows on the surface."

Avoid "cross hatching" lines as much as possible. The cross hatch has its use in shadowy places or sometimes in producing softness in foliage which is in shadow. While cross hatch lines produce a soft effect at the same time they destroy what is known to the artist as "texture."

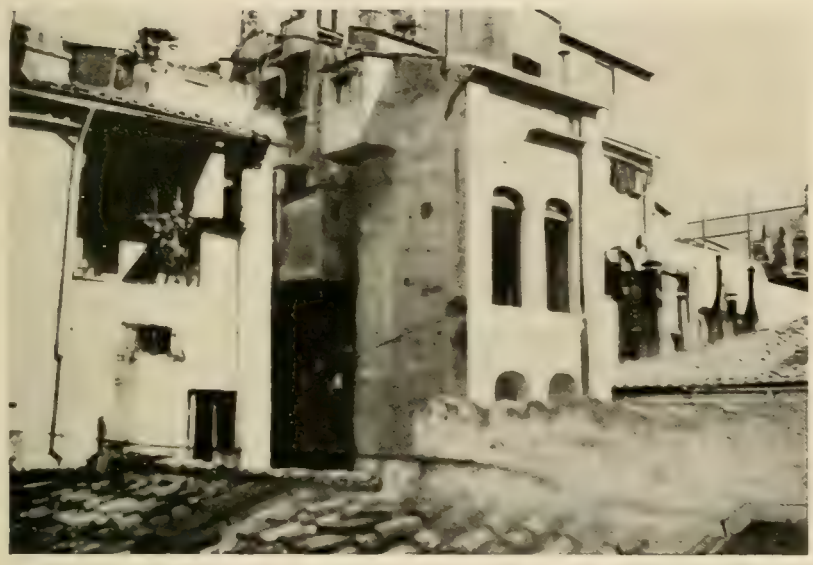
Texture is a matter of great importance in rendering a variety of objects. In foliage texture may be obtained by studying the individual growth of trees and aiming to let the pen strokes follow these lines as much as possible. The variety in width of lines and width of white spaces between black lines is of great importance in expressing texture. Heavy lines look coarser when widely separated. It is, however, advisable to keep pen work rather open to allow for the mechanical process of reproduction.

Eliminate outlines whenever possible and let your tints be formed by groups of lines to express the edges. "There is, of course, no authority in nature for a positive outline; we see objects only by the difference in color of the other objects behind and around them," but there are plenty of occasions especially in shadow edges when an outline is not only necessary but very desirable to give snap and firmness to the edges. Another use of the outline, which may be styled a convention, is to represent distant objects like hills, trees or mountains or even cloudy skies in pure outline.

Pen and Ink drawing is a sort of shorthand expression in art and it is apt to lose its individuality if you aim to express too many values, as for example those of a wash drawing. Too elaborate an arrangement of tones and values produces monotonous grays and a general indirectness of method. The very nature of the pen seems to lend itself to the particular function of picking out the most essential features of a subject.

So let your aim be economy of line and directness of method. Let every line mean something and do not use a dozen lines when five or six will express a tone much more clearly and directly.

The rendering of foliage is an important element in landscape drawing and is really a subject in itself. If you wish to make a success of it you must first be able to make a good drawing in pencil. Much funda-



Illustrative of William S. Rice's article on page 371

For Pen and Ink Treatment, see page 377

mental knowledge may however be gained by working with a brush only from natural trees direct rendering the trees in silhouette. No matter which way they are drawn the outlines should always be free and subtle so as to suggest the edges of leafage. In conclusion I would say that the student who aims to make a study of foliage can do nothing better than to make a collection of clippings from the work of well known illustrators and use these as reference material rather than as models to copy from. Much suggestive material of this sort helps the student in conjunction with his studies made directly from nature.

Something Big in Projection

Atlanta, Ga., March 29, 1923.

The greatest projection feat ever accomplished in modern photography took place last night when Gutzon Borglum, noted sculptor and the man selected to carve the great Confederate Memorial on Stone Mountain near here, successfully tried out the camera with which he will photograph his figures across the face of the cliff.

From a slide of 2¼ inches long, the new projector designed by Mr. Borglum and Ed. S. Porter, projection engineer in charge of the photographic work, threw a picture 200 feet high upon the face of the giant monolith 700 feet away.

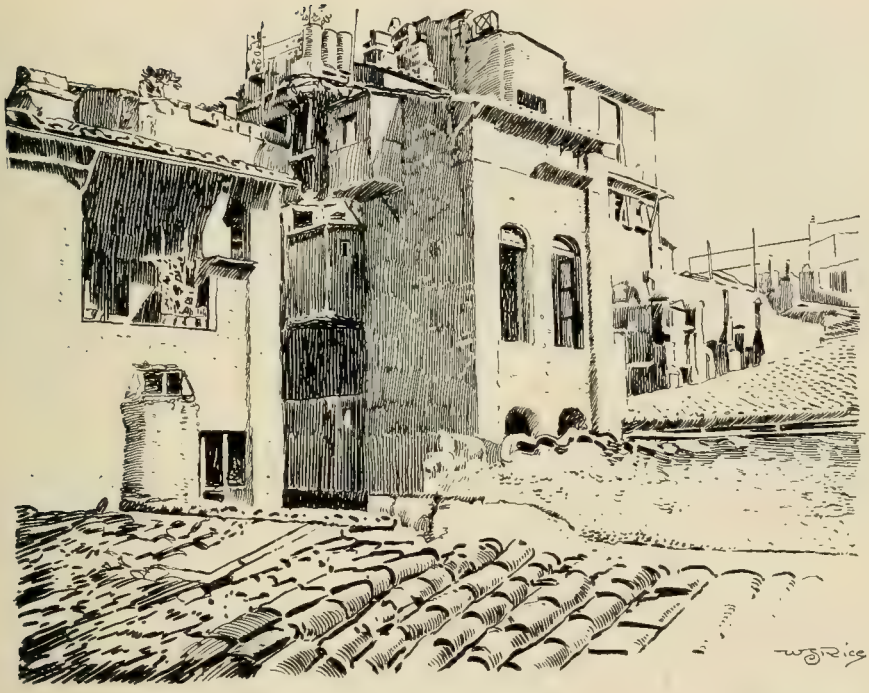
Scientists and cinema experts predicted that no lens could possibly stand the heat that would be generated in throwing a reflection 700 feet through the air. A special air-cooled lens was built, however, which completely overcame this difficulty.

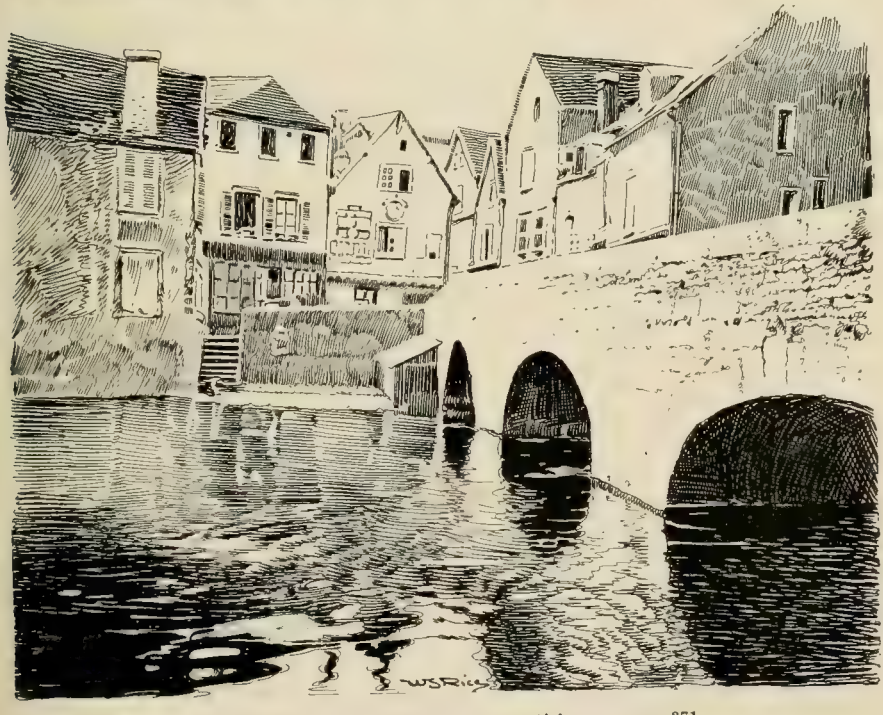
To obtain the best results, Borglum found that it would be necessary to use between 130 and 175 amperes. To do this, a motor and generator were installed in the projection hut—the most powerful ever employed in projecting machinery. The projecting camera was presented to Mr. Borglum by the Precision Machine Company, and the motor and generator by the Westinghouse Electric Company for use on the memorial.

Following its successful preliminary trial, the new camera will be used at once to photograph the figures on the mountain side. Nitrate of silver will be poured over the top of the cliff, forming a black sheet. Then the figures will be cast by the projecting machine, and developing fluid poured or sprayed over them.

The fluid will then be washed off, the figures outlined with paint, and work on the carving will then begin.

Nothing to compare with this memorial has ever been attempted. The figure of Lee, for example, will be 90 feet in height. His sword will extend 38 feet, and his horse's head will be 30 feet long. Other figures in the carving will have the same proportions. And with the aid of photography, it will be the first carving of its kind ever done in which perfect proportions are maintained throughout the work, as well as correct perspective from every angle.





Illustrative of William S. Rice's article on page 371

The Pen and Ink Treatment of the Photographs shown on page 375

A Night View

Through the kindness of Mr. Jos. O. Hickox, connected with Mount Wilson Observatory, Pasadena, California, we are able to present this interesting cut. The following is what our contributor has to say on the subject:

"I think you will be interested to see the photograph I am enclosing showing the lights in the valley as seen from the top of Mount Wilson, six thousand feet elevation. I got the picture with a two hour exposure on an N. P. X-ray plate on the night of October 1st. The city directly at the foot of the mountains is Pasadena; the irregular patch above, Los Angeles, and to the extreme right the beach towns of Santa Monica, Ocean Park, and Venice, followed to the left by Rodondo Beach, San Pedro, and Long Beach. In the left half of the picture Catalina Island may be seen dimly, and a few faint lights at Avalon, seventy miles from where the picture was taken. The light streaks joining the cities are from street car headlights and automobiles on the boulevards. I forgot to mention the lights on the battleships in San Pedro harbor.

"The exposure was started a few minutes before dark, and luckily there was a bank of clouds in the southwest which prevented 'star trails' from showing."

EMERGENCY LABELS

When experimenting with new developers or processes involving the use of several solutions, trouble is often caused by not having the bottles labeled, and it is generally too much trouble to paste labels on. A good method is to write the label on any piece of paper, snap a rubber band around the bottle, and slide the label under the rubber. This method will be found very serviceable for temporary labeling, as they are quickly removed and will not come off easy by handling the bottle.

(Contributed by R. L. McColm, 202 Fourth avenue, Asbury Park, N. J.)

Desensitizing in its Commercial Aspect

By A. C. Banfield, F. R. P. S.

From the "Photographic Journal," London

In a short paper which I read before the Pictorial Group a few months ago, I lamented the fact that photographers, generally speaking, lacked the experimental sense. Science progresses continually, but it is always a matter of some considerable time before the teachings of science are applied in actual practice. As an instance of this, there is no better example than the Thiocarbamide process in the development of lantern slides, long so ably advocated by Mr. Dudley Johnston, though the process was worked out many years ago by Dr. C. E. K. Mees.

Much the same thing is apparently taking place in the matter of desensitizing prior to development. Careful inquiry among many of my friends leads me to suppose that, in spite of the publicity given to it in the Press, it forms a terra incognita to amateur and professional alike. This is not as it should be, for to the photographic worker nothing is calculated better to serve him than desensitization applied as an essential part of his photographic routine.

When Mr. Storr, some two years ago, first demonstrated before an audience at the Royal the desensitizing properties of Pheno-Safranine, I realized that this gave the professional photographer in particular quite a new power in his operations, not only providing extraordinary convenience in working, but also serving to shorten very materially the time occupied in the development of large batches of negatives. I immediately tried the dye, and though the desensitizing from the practical point of view is perfect, yet this particular dye has unfortunate staining properties which render its use inadvisable and, in my opinion, from the commercial point of view impossible.

When a dye possessing such revolutionary properties as Pheno-Safranine is discovered, it is hardly necessary to remark that science immediately sets to work to find other dyes having the same property, and in view of the enormous number of dyes at present known, it was only a matter of time before several others were found. One such dye formed the subject of an able article in the "British Journal of Photography," by Mr. R. E. Crowther, last July.

Mr. Crowther in his article dealt with the properties of three different dyes; and as from his remarks the third (Pinacryptol Green) appeared to be the best, with some difficulty I laid in a supply for a practical trial, the trial proving such a success that it caused me to institute quite a new darkroom routine from which now I should be sorry to depart.

The dye, as bought, is a metallic-looking powder, having something of the characteristic appearance of iodine. It is very readily soluble in water. Both the original instructions and Mr. Crowther in his article re-

commend a solution of 1 in 5000 for use. Here let me remark that, through an oversight, I made up my first solution of just half this strength, and as I did not get the least sign of fog on the negatives I have used it at this strength ever since.

Turning now to the practical side, I must refer at short length to the ancient method of development as practised in my every-day business. In equpment, which, from the area point of view, occupies far less space on this the 12 by 10 plate is the standard size, and they are used in very large numbers; it is quite an ordinary matter to find anything from nine dozen to a gross awaiting development in the afternoon. These were developed in a wooden dish four at a time, and development under these conditions is inclined to become intolerably tedious. Tanking them I found unworkable, though I tried hard to make it a success.

Pinacryptol Green, however, has changed all this. The dark-room sink now carries three tanks. No. 1 is the desensitizing tank, Nos. 2 and 3 contain developer. These, with a dozen racks made to hold twelve 12 by 10 plates (which are spaced half an inch apart), constitute the complete sink.

Confronted with a batch of exposed plates, a rack is taken and filled with a dozen plates in a red light, and it is immediately placed in the desensitizing bath for a minute. Bubbles adhering to the film in this bath were at first a nuisance, as this left small circles of film that were not desensitized. In this connection I found that dropping the cage of plates for an inch or so on to the bottom of the tank dislodged the lot, and the negative developed up free from the little circles of fog where a bubble had persisted.

After a minute in this bath a strong yellow light may safely be turned up, and the rack of plates is placed in the developing tank, and a second rack of plates can, if necessary, be desensitized in a similar manner. A third tank could, of course, be run, but personally I find that two developing tanks with 24 plates is as much as one can look after properly without slowing down the developer.

The light used for developing is a very strong yellow, using one thickness of the commercial yellow fabric only. The whole dark-room is flooded with light, so much so that it is easily possible to read small print in any part. The gain in comfort is incalculable, and as the negative can be watched most critically in all stages, it is possible easily to keep them very level in grade.

The negatives are absolutely free from fog, though the desensitizing solution is only half the recommended strength. Panchromats, films and the usual run of studio negatives all go through the dye, and all respond just as readily.

I have not yet observed the least staining propensity of this dye; both the plate and the fingers are quite unaffected.

It may be asked after all this, "Where is the gain?" There is first the enormous saving of time; in my case the saving is in the proportion of one to five, i. e., I find I can get through five times the number of negatives that I could under the old conditions. Then the brighter illumination of the dark-room is a boon only to be experienced once to realize what a comfortable place a dark-room may be under modern conditions; it is a boon worth almost as much as the incredible saving in time. Then again, as it is possible accurately to judge the density of a negative, it is easily possible to keep them of a very level quality—always a matter of considerable difficulty in the old days of shrouded gloom.

I am not claiming that desensitizing is much of a help in cases where an occasional plate only is developed, but for anyone who is accustomed to develop plates in bulk it will be found to deprive photography of one of its worst horrors—the uncertainty and gloom of the dark-room.

NO MAN'S LAND

F 4.5 Service from an F 7.5 Lens

By Wm. D. Rawling

With Illustration by the Author

Having waited three or four Sundays for an outing with my camera, (Sundays and holidays are the only times that I have for picture making) and the bad weather still persisting that I should stay at home, I decided that rain or shine, I would make some exposures on the next Sunday to come. Well Sunday came and it rained, in fact it snowed, but I was prepared.

Now as most amateurs know, one can make exposures when the light is poor on ordinary film, but the result will be some sadly underexposed negatives, unless time exposures are given and that cannot be done where there are moving objects. Therefore, if you make instantaneous exposures, intensification is necessary and the outcome is not always as good as one would like to have it, so I did away with intensification in this particular instance and gave the proper exposure for the proper plate.

Now, the picture enclosed, was made in the rain on a day in January and the exposure was 1/25 of a second at stop f 7.5 Wollensak Lens used, and the negative is just as sharp as if the sun had been shining.

Question: How did I do it?

Answer: Here is the dope.

My camera is a No. 3 Eastman Kodak, fitted with a combination back whereby I can use either film or plates. It is a very useful contrivance and enables one to focus on the ground glass the same as large cameras. I also have a "Wellcome" calculator and diary, which is full of useful information, so taking my "Wellcome" calculator and looking up the factor numbers for plates, I found one that I thought would fit the bill, i. e., Seed Graflex Plates.

The speed of these plates is about eight times faster than the ordinary roll film. In other words, if I were to take the above picture with a roll film at 1/25th of a second, I would have to have an f 4.5 lens wide open, but the fast Graflex plates cut down my exposure to f 7.5 making it possible to make an instantaneous exposure. As you will notice, the time 1/25 was quite fast enough to arrest any motion of the figures in the foreground. The plate was developed in Eastman special developer. The print was made on No. 6 P. M. C., and developed in Seneca developer.

In making pictures in the rain, I would suggest taking an umbrella with you, or still better, get under an awning as any water that may get into your camera is liable to cause trouble.

VIEW ON MARKET STREET, SAN FRANCISCO

NON-STAINING BOTTLE LABELS.—Very efficient labels can be made for your solution bottles by the following method: Typewrite or print label on common bond paper. Give bottle, where label is to be attached, a coat of spar varnish. When varnish is just "tacky" apply label, pressing tight. Then apply another coat of spar varnish, covering label completely with a coat of varnish.

The oil of the varnish will turn the label yellow, but it will not come off and cannot be stained with such aqueous solutions as pyro or ferric solutions, due to the fact that the spar varnish is waterproof. Bottles so labeled will last for years.

Contributed by R. L. McColm, N. J.

Vertical Stand for Reproduction Work

By Max Henry Ferrars

Late Lecturer in Photography, University of Freiburg, Baden

The advantage of the vertical arrangement is that we have gravity for our ally instead of the contrary, and have only to lay the object on the horizontal object-table in place of fastening it in a vertical position, which is especially difficult with heavy and bulky tomes from which we have to copy illustrations. When a draw of over 6 feet is needful, horizontal apparatus may have to be employed in the usual way. The present apparatus is 200 cm. high, with an effective draw of about 150 cm., which, with a

VERTICAL STAND AND CAMERA

battery of 2-3 lenses, meets most requirements. The upper and lower cantilevers support two drawing boards, measuring 40 x 40 and 75 x 100 cm. respectively, resting on four leveling-screws each. Parallelism is thus

insured. Even larger objects can be set upon the table. From his place on the top step of the ladder the operator can raise and depress the table by means of the hand-wheel that actuates two long iron screws in the uprights, focusing the image by a long screw in the base-board of the camera. He can shift the upper board that carries the camera in every direction, so as to obtain any desired extract from the subject upon any desired scale, and from the same point switch the light on and off. When the room has no other lights than those illuminating the subject—which, moreover, are shaded above from his sight—he needs no dark-cloth. He can rest his elbows on the top ledge of the massive stand, lean over the ground-glass as over a desk, and study the object under the magnifier, which likewise rests in place by its weight, with a degree of ease and comfort not attainable with horizontal apparatus or with vertical apparatus of less stable construction. Work can be executed rapidly, even when the scales vary, still more so when they are identical and leaves have only to be turned over and weighted. A practised operator will expose a dozen plates and more in the space of an hour. Only one candelabrum is shown in the illustration. The apparatus was constructed for the University of Freiburg by Messrs. Ernst Hecker and Paul Tschachmann, both of Freiburg in Baden, from the designs of the undersigned, and the peace price was under 1000M, including the **Orthar-lens battery** by Messrs. Plaubel of Frankfurt a/M. The wood used for the stand is ash. A replica was executed for the University of Munich in pear-wood.

Note: I have much pleasure in endorsing the claims made for this excellent apparatus, the good points of which so impressed me that I asked Professor Ferrars to write a description for the benefit of our readers. For purposes of copying from large books it has advantages over the copying arrangements of my vertical cabinet (vide Camera Craft).

H. D'ARCY POWER.

FORTHCOMING EXHIBITIONS, 1923

August 25th to September 8th.—Toronto Salon of Photography. Last day for receiving prints, August 1st. Particulars from J. H. Mackay, Secretary Salon Committee, Toronto Camera Club, 2 Gould street, Toronto, Ontario, Canada.

August 31st to October 7th.—San Francisco and Oakland International Photographic Salon. Last day for entries, August 11th. Particulars from H. A. Hussey, 64 Pine street, San Francisco, California.

September 8th to October 6th.—The London Salon of Photography. Last day for entries, August 29th. Particulars from the Hon. Secretary, 5A Pall Mall East, London, S.W.1.

September 10th to 15th (Incl.).—International Exhibition of Pictorial Photography, New Westminster, B. C., Canada. Last day for entries, August 31st. Particulars from Secretary, D. E. MacKenzie, Hart Block, New Westminster, B. C., Canada.

September 28th to October 6th.—The Emporium Third Annual Photographic Exhibit. Last day for receiving prints, September 20th. Particulars from Emporium, Photographic Exhibit Department, San Francisco, California.

November 5th to 17th.—Frederick & Nelson 1923 Photographic Exhibition, Seattle, Washington. A prospectus will be sent to those interested upon request.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FOUNDED MAY 1900

VOL. XXX San Francisco, California, August, 1923 No. 8

Pictures with Bronze or Silk

Photographs of this sort are particularly suited for souvenirs. The picture is dependent for its pleasing effect if a suitable print on glass is backed up with bronze or a piece of silk.

The plate used must be clean working. A landscape plate is preferable to a portrait one; being coated with a slower emulsion, it is not so likely to fog. Any trace of fog is fatal to good results. Having secured a suitable plate, we make a positive print upon it. This is done in exactly the same way that a print is made on paper. The plate, however, being so much more sensitive than the paper, is exposed to the light for considerably less time; also, it is not placed so near the light while making the exposure. A distance of five feet from a subdued white light, with an exposure of one second, will generally be sufficient. Naturally one will be governed by the density of the negative and the strength of the light.

Development of our plate is the next thing to claim our attention. Take the developer you are accustomed to using and understand, and add about one-fourth more water to it. With this weakened solution develop a thin positive on your plate; do not overdevelop. Then fix and wash plate in the usual way, and place in the rack to dry.

Now comes a severe test as to the suitability of your positive to meet requirements. Take the plate from the rack when dry and lay it gelatine face downwards upon a sheet of white paper. This will show at once the quality of our work. There should not be any heaviness in our shadows and no trace of fog anywhere. Our lights should be clear and sparkling. A plate meeting these requirements may be called good, and is ready for finishing.

There are two ways in which this may be carried out, both effective. One is to coat the positive on its gelatine face with bronze. This may be gold, silver or any color of bronze suitable to the subject. The color may be applied by flowing or with brush. When this is dry, back your plate with a card; use binding tape or paper to secure the four sides.

The second way of finishing the plate is to attach a piece of delicately-colored silk by its four corners to the backing card and the whole is bound together. We have seen portraits finished in this way with a peach-colored silk; the effect was most attractive, and could not fail to be pleasing as a souvenir.—E. F.

For the Professional

In the Interest of Commercial and Portrait Photographers

MEETING OF THE PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA

Held at Hotel Stewart, San Francisco, on Monday Night, July 2nd, 1923

This meeting was held one week in advance of the usual time, in order to give the delegates to the National Convention a "send off" worthy of the importance of their mission.

At the conclusion of the dinner, Mr. Terkelson, presiding, said: Ladies and Gentlemen, I regret to say that Mr. Webster is unable to attend tonight, so, as second Vice-President—I am presiding in his place. As a preliminary, and to get better acquainted, I will ask Mr. Lancaster to state who he is and pass the word along the line.

Mr. LANCASTER: My name is Lancaster; I live in Martinez; and I am a photographer. (laughter)

The other members took the cue and announced themselves in more or less humorous language, especially referring to any visitor they may have brought with them.

CHAIRMAN: I will now turn the meeting over to a good old friend of ours, Mr. Blumann, who has held us together in many ways and helped us a whole lot. (applause)

MR. BLUMANN: It has been delegated to me this evening to speak a farewell word to your Delegates who are going to the Convention and to refer to the honorable and important duty that has been entailed upon them; and all of you who have sent them there I am sure feel certain that they are going to acquit themselves honorably and favorably. What they have to do will not be altogether a pleasure; people are dropping by the hundreds with the heat in the East. Leaving their families behind them, they will have to encounter all the temptations of an effete and over-populated East; they will run the risk of buying gold bricks—but I believe they still sell them on California Street. The Association has been very much worried about one thing— they wanted to express themselves fittingly to each and every one of the Delegates; so they decided not to do it in words, but to give to each some little appropriate token expressive of their feelings and properly fitting for the individual. For Mr. McCullagh they have chosen a "little Berkeley Girl," something that at all times will give him a good sitter and something to accompany him on his way—a "little Berkeley Girl."

MR. McCULLAGH: Thanks for your kindly thoughts; I am sure she will be a good mascot and help to bring the Convention to San Francisco next year.

MR. BLUMANN: Mr. Anderson, here is something that will always remind you of home; but, unfortunately, there is no Scotch in it. It is only a feeding bottle—pure and simple. (laughter)

The gifts to the two other Delegates, Mr. Lancaster and Mr. Morton, require a few serious words. California is noted as a place where everything grows profusely, and it is not quite proper that bald-headed men should represent us. I have not any use for a bald-headed man (laughter)—not when the remedy is as easy as this. Mr. Lancaster, may you wear this wig with honor to the Association and credit to yourself. Mr. Morton, a similar gift with similar good wishes to you, sir. (applause) As you have not provided any such gift for the speaker, I beg to inform you that he is greatly offended and will sit down. (applause)

MR. LANCASTER: As to myself and this piece of hair for me to wear, allow me to say that years ago I did have a lot of hair; but, since losing it, I never had enough cheek to try one of these things

before. I will take it home and also to Washington with me, and see what sort of luck it brings us.

MR. YOUNG: Let us give three cheers for the Delegates.

(Three cheers for the Delegates were given in a most hearty fashion.)

CHAIRMAN: We will vary the programme tonight. In a few minutes we will have a demonstration by Mr. O. J. Smith of the Eastman Kodak Company. For this the tables will be cleared. It will all be quite informal, and after that will come our report when we will tell you something about the aims of the Association. We will change our rule of order for that purpose. Now, please talk and meet each other and call each other by your first names. (applause)

After the tables were cleared, Mr. O. J. Smith gave a demonstration on "Artificial Lighting."

MR. O. J. SMITH: Although we, as a nation, have the reputation of being able to sell wooden nutmegs, and of doing other almost impossible things, I may say that, while we were arranging this studio apparatus, it occurred to me that only a few years ago a demonstration of this kind with this power would have been quite impossible. As many of you know, in fact all of you, the photographer was dependent upon daylight both for making negatives and for printing, and many of you have had experience of the top light and fifteen or twenty feet of skylight from one side of the room to the other. These lights were generally draped with white muslin—that didn't stay white; and I believe that, as I see it now, in those days the photographer's principal difficulty in making portrait lightings was to introduce shadows in his pictures. Of course, at the present time, we have changed that considerably. Following the top light came the single slant light, which, as a rule, was ten or twelve feet wide and fourteen or fifteen feet high, and dropped into the room from two to four feet. This did away with a great many curtains, and this was quite an advantage, because the light did not happen to fall from so many different directions, and this enabled us to get the shadows that are so necessary. Then, following this, someone had enough merit to try out a perpendicular light; and that light, as a rule, was reduced in its dimensions from eight to ten feet. I forgot to mention that, with the single slant light, we had opaque curtains running from the top to the bottom; and I never knew whether they used the top curtains. The perpendicular light did away with the top curtains because the light fell from a better angle. The light did not carry across so much and did not need the top curtains and had a set of roller blind curtains to control the light and a reflector and screens.

Mr. Webster phoned to me to come over and give you a little demonstration. He said I should make a demonstration of portrait lighting. If he had said "lighting," that would have been quite a different thing. "Portrait lighting" is quite a special affair. We might place a subject under the light or near the light, and then, when the light side is contrasted with the shadow side, we find the shadow side quite dark, we know then that the light is out of balance. That might be termed "art" lighting; but with portrait lighting it is necessary to balance the shadow side with the light side so as to give a blending of the lights into the shadows and a blending of the shadows or half-tones into the light.

Now, I think this last point is quite important, because I find that a great many photographers do not seem to pay enough attention to that particular point. Ten or twelve years ago there seemed to be a mania for reflectors; you didn't need them and it did not last long. Let us not be faddists. It does not matter how you get results, so long as you get them, whether by reflectors or an additional supplementary light. It does not matter, in my opinion, if your negative is not altogether perfect in the lighting, does not agree and blend and is not centered on the face—it does not matter whether you even use chemicals, so long as you do it so that it will not be noticeable that you have been doctoring it. So long as you get results, it does not matter how you do it.

I remember speaking in the old "top light" days on Daylight Photography—during those days I had a studio of my

own back East,—and during the rainy season, you know, the photographer just sat down and wondered whether the sun would ever shine again. Someone said to me one day—he was waiting for the sunshine too—"I wish that some guy would get busy and find out how to bottle up some of the sunlight; I'd buy a few bottles of sunlight when we need it!" I did not suppose anything of that kind would ever occur. But today, here it is, the Halldorson Electric Cabinet.

Mr. O. J. Smith here called in the services of Mr. Siller of Hirsch & Kaye, Miss Metcalf, a brunette young lady in a brown dress, and Miss Jean Traig, a very light blonde young lady in a pale pink dress, to act as models.

Mr. Smith used in this demonstration a Halldorson Electric studio lamp improved model, rising four 1500 watt blue Mazda lamps; a Winfield focusing spotlight, with 400 watt blue Mazda lamp; a Century 7A studio outfit equipped with Voightlander Heliar lens, 16½-inch focus, a dark and a light background, a F & S home portrait reflector and a Century Model B head screen, loaned and installed for the occasion by Hirsch & Kaye.

Mr. Smith made a large number of eight by ten exposures; but, without the pictures to refer to, his explanations of the various lighting effects would not make good reading matter. However, we are to reproduce his pictures and the balance of his talk in the next or September issue.

Mr. Terkelson here resigned charge of the meeting to Mr. Morton, who called for the reading of the minutes of the last meeting, which were read by Mr. Anderson, in the absence of Mr. Felloes. The Minutes were approved as read.

Miss Dahl, as chairman of the Convention Committee, presented the following report:

Our Convention Committee is very much pleased with the ready response we have had to our request for support in winning the 1924 International Convention, both in money and pictures. It has been a pleasure to serve on this Committee for this reason:

We have enough money in sight to give each delegate going to Washington $300.00, but not enough to allow them money to make California Night a memorable one and this we want to do. The P. A. of A. has given us a place on the official program. We want to take advantage of this and should have about $300.00 to spend on music and other attractive features, also we have had to use some money for necessary expenses here. This leaves us short between three and four hundred dollars and I am going to ask each one here tonight to give $1.00 each. $59.00 was collected and included in report given below.

Previously acknowledged		$820.00
Wm. McClearie, P. O. Vacation	10.00	
Henry M. Seron, Bakersfield	10.00	
E. M. Hammond, Porterville	10.00	
Electric Blue Print Co., Oakland	10.00	
J. K. Piggott, San Francisco	10.00	
W. S. Valentine, Redding	10.00	
Marsh & Company, San Francisco	10.00	
Gertrude Cockroft, Alameda	10.00	
Ansco Company, San Francisco	10.00	
C. A. Meyers, San Francisco	10.00	
Chas. M. Johnson, San Francisco	10.00	
Willard E. Worden, San Francisco	10.00	
Carlton G. Smart, San Francisco	10.00	
C. W. Tucker, Covina	5.00	
Mrs. M. E. McEvoy, Oakland	5.00	
M. Camarri, San Francisco	5.00	
Dorothy M. Crawford, Burlingame	1.00	
		$966.00
From Los Angeles:—		
Howland & Dewey Co.	$25.00	
B. B. Nichols, Inc.	15.00	
A. Putnam	10.00	
P. H. Merriman	10.00	
Eugene Swarzwold	10.00	
Wm. Graham	10.00	
Jos. Shipman	10.00	
Western Wholesale Drug Co.	10.00	
M. F. Weaver	10.00	
C. W. Swearingen	7.50	
Hughes Photo Service	5.00	
Geo. P. Clifton	5.00	
Wm. Bailey	5.00	
		132.50
Collected at meeting July 2nd		59.00
Total		$1157.50

Miss Dahl called upon Mr. Morton to supplement her report.

MR. MORTON: The organization has been extending us their good wishes without words, and I should like to make my report without words, except to express my thanks for the honor of being delegated to represent this Association. Also to say that, among other things, we are going to have a California Night, in the furtherance of which several prizes have been donated by the dealers in San Francisco, to whom I hope you will tender a very hearty vote of thanks.

There is a delegate here from Honolulu, a young man who would very much like to have the next Convention held in Honolulu; but I asked him to help us get it for San Francisco; and he said as he had very little chance of getting it for his home, he would help us get it for San Francisco.

Mr. Lancaster proposed a vote of thanks to the donors of prizes, which was seconded, and carried unanimously.

Mr. Lancaster also proposed a vote of thanks to Mr. Smith for his very interesting and able demonstration of Artificial Lighting. This was seconded and carried unanimously.

Mr. Young gave a very eulogistic and appreciative expression of the feelings of the Association toward its delegates and asked that they be sent on their way with some real applause. This was given in no stinted fashion.

MR. MORTON: We hope we will prove worthy of that applause.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

Outdoor Portraits and Backgrounds

Many are the varied reasons why we first take up photography as a hobby.

With some it is the desire to keep a record of the beautiful spots they have visited and their outings with their friends. With others it is the desire to keep records of their children and their children's doings. Others find that for health reasons they have to get out doors. They turn to the camera, it not only furnishes an incentive for them to get out, but proves a companion to them on their tramps.

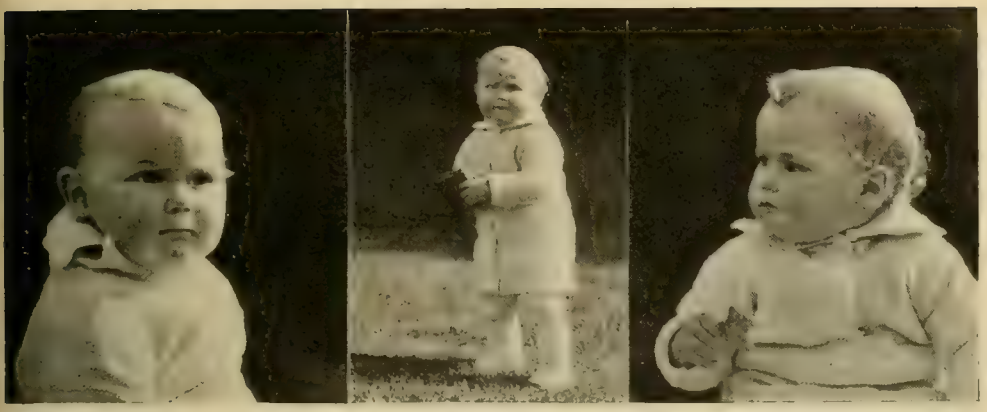
Whatever the reason that prompted us, sooner or later we all try our hand at making pictures of our friends. Sometimes we are successful, but more often we are not. Our friends do not like our attemps, neither do we. What the trouble is we do not know.

Many give up when they reach this point and take another branch of the game, while others keep plugging away, asking their more advanced friends to criticize their attempts and aid them towards getting better results.

I have done a great deal of home portrait work, but outdoor portraiture, especially of children, has an appeal for me that the indoor never had. Children are usually more natural outdoors and there is no end to the different lighting effects obtainable. Also, the amateur with the ordinary lens equipment will be able to make snapshots of the children, whereas, indoors it would mean a time exposure and very likely movement of his subject.

Choice of Lighting and Background

There are several points or details to be considered. The two principal ones are choice of lighting effect and our background. Many out-of-door portraits are spoiled through the effect or part the background plays in the final picture. The background is so prominent that it is the whole picture, the figure fades or blends into it. As a portrait it is a fine background. How can we overcome this? Is the question we ask ourselves. There are several ways. One is to have the figure sharp and the background out of focus. In this way we will get separation between



Why? Come on! Contented

our figure and the background, also loss of detail in the background and as a result our figure will stand out.

The simplest way to handle backgrounds is to have the source of light falling on our subject in such a way that our background is in shade. If you will study the illustrations, you will readily see what I mean. The background is a thick, dark, green bush all in shade, the subject is out in the sunshine and about fifteen feet distant from it. This accomplishes two things. The figure is in focus, while the background being so far in the rear is softened. Also our figure has had full exposure while our background, being in the shade, has been under-exposed. The combination of being out of focus and under-exposed has given us an almost plain background against which the figure stands out in full relief.

Different Types of Backgrounds

This is only one of many backgrounds you can make use of outdoors. A tree trunk will sometimes do very nicely. A hillside makes another good background. Around the home are usually many spots or corners that answer very nicely. We can use the side of the house for a background, but be sure and get it slightly out of focus. If one is photographing the doorway of the home, or some other exterior view and using the figure only as an accessory, the foregoing advice does not hold good. Under these conditions we want the building as well as the figure in focus. In handling outdoor portraits we have to use our own judgment as to what is wanted. For example, we might want to use some overhanging foliage as a background. How, or where to place our figure we have to decide ourselves. The overhanging branches of a tree covered with blossoms makes a very interesting background for a little girl. She might be gathering the blossoms, or we could have her parting the branches and looking through, or doing something along these lines, but be sure and let her be natural. Get her interested in gathering the blossoms if necessary, and it is not likely that she will be stiff or posed looking.

Lighting

The illustrations show only three of many ways of lighting our subject. We could pose our subject with the sun behind him. The sun would naturally be shining into our lens, but our lens hood would take care of that. Another way is to have the sun to the side somewhere between our subject and ourself, approximately at an angle of about 45 degrees. In fact, we can turn our subject any way we wish to get the effect that appeals to us. There is one type of lighting that we should avoid, that is, the sun shining directly on our subject from somewhere behind us. You can readily see what would happen. Yes, you are right. Our subject would screw up his face and either close his eyes or squint. Frontal lighting like this also gives us flatness and that is something we should always try to avoid.

What do you see, son?

Before we leave our backgrounds let us talk about one that is best left alone. It is the tree or bush that shows patches of the sky between its branches. The openings between the branches will show up as white spots in our print and will undoubtedly prove a counter attraction to our subject.

Time of Day to Make Portraits

We now come to the question—what part of the day is best for making outdoor portraits? Owing to the low angle of the sun during the winter months we can make our portraits at any time we wish, providing the weather is favorable. The California climate is so congenial, even during what we call our winter season, that I almost forgot that in other parts of the world where this magazine reaches, conditions are not so favorable for outdoor work.

During the summer months the morning or evening is the best time. You might ask, Why? I will give you my reasons. During the middle part of the day the sun is at its highest. Suppose we pose our subject out in the open sunlight, what do we get? If our subject has a hat on, the face will very likely be all in shadow, if not, the top of the head will be very strongly lighted, with short deep shadows below the eyes, nose and mouth. If we turn our subject another way, the sun's rays might just strike the tip of the nose and maybe the chin. Now, this lighting effect might be just what we want for a particular type of subject, but I hardly think it would do for the children.

Morning and Evening Effects

During the morning or evening, the sun is not so high and lights our subject from a lower angle. Also, the lighting is more soft, giving more roundness to the features and in general a more pleasing effect than the midday light. All of the illustrations were made about 4:30 P. M. The sun was getting low as is shown by the length of the shadows. The two busts

were made from the same view point. In one, the baby is turned partly towards the source of light, in the other, his position is reversed so that the light strikes the back of the head. The full length view shows a little more action. The young man was tired of posing and insisted on running away. His attention was attracted and while he stood hesitating, the exposure was made. The view of the baby with his mother shows a simple easy way of grouping two figures outdoors.

All the illustrations were made with a R. B. Auto Graflex fitted with a 8¾-inch Verito. Number 1 was made on Kodak Panchromatic film and received an exposure of 1/25 second at F 8, no filter. 2 and 3 were made on Kodak Cut film and received an exposure of 1/50 second at F 8, no filter. 4 was also made on Cut film and received an exposure of 1/35 second at F 8. This was the last exposure made. The films were all tank developed with pyro-soda. The exposures were very full and films developed for slightly less than the specified time. The prints are all made from part of the negative only. I purposely worked farther away from the subject to get better drawing and perspective.

Any of these pictures could have been made with the ordinary Kodak, provided you shaded your lens from the sun's rays by either using a lens hood or something else that would answer the purpose.

I will grant you might have had a few failures by not judging the distance right or the subject moving, but what are a few failures when one or two exposures turn out successful? P.D.A.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

—British Journal of Photography.

Variety of Tone in Sulphide Toning

By the additon of mercuric chloride to the bleaching bath, a variety of colors can be obtained in sulphide toning, ranging from pure black, through various shades of brown, to red chalk. At a recent meeting of the Portsmouth Camera Club, Mr. R. Parker gave a table which he had prepared showing how the changes can be rung upon, at the most, five chemicals, three being used in the bleaching process and two in the darkening. That table we reproduce below.

The process is applicable both to bromide and to gaslight prints, but the colors obtained vary to some extent with the type of paper. The prints should be fully developed, thoroughly fixed, and well washed; and the washing between bleaching and darkening must also be thorough when the mercury salt has been used for bleaching. It will be seen that the usual potassium ferricyanide and bromide bleacher is employed, and for the colder tones mercuric chloride is added; and when this is done the print will be found intensified after treatment, so allowance must be made for this. In addition to, or as an alternative to, the sulphide bath for darkening, Schlippe's salt is used for the warmer tones. The proportions of the ingredients are the same for all solutions; the figures given referring to the number of grains required to make up three ounces of bleaching and darkening baths respectively.

Color.	Bleaching Bath.			Darkening Bath.	
	Potassium Ferricyanide.	Potassium Bromide.	Mercury Bichloride.	Sodium Sulphide.	Schlippe's Salt.
Black	6	18	6	12	—
Brown-black	9	15	3	12	—
Dark brown	18	24	3	12	—
Brown	12	18	—	12	—
Warm brown	12	18	—	4	8
Red brown	12	18	—	2	10
Red chalk	12	18	—	—	12

The Light and its Master

One of the most frequently recurring queries which we receive from our readers relates to the most desirable position for the main light of the studio, whether it be daylight or one of the many forms of artificial illuminants. Many of the inquiries which refer to artificial lighting come from photographers who have been working with daylight for years, and yet have not grasped the elementary principles of lighting to an extent which is sufficient to enable them to deal with an unfamiliar source of light.

The first point which has to be grasped by the beginner is, that within certain limits, one kind of light does not vary greatly from another, the difference between them being more in the way of intensity or strength and in concentration, rather than in an essential quality. There is no reason why any difference should be detected between a picture taken by daylight and one taken by any artificial light, even flash powder, provided that the light is skilfully controlled and a correct exposure given.

It has been accepted by practically all authorities on the subject of lighting the figure either for photography or painting, that the best starting point for the student is to commence with a light falling upon the head of the sitter at an angle of forty-five degrees. The light might, however, fall at this angle from many directions and would give as many different effects, so that it is necessary to explain in which way it should fall to produce a simple "three quarter" light.

Given an ordinary rectangular apartment with top light or with a very high side light, the sitter is placed in front of the end wall, the whole of the glass being covered with blinds or curtains. A long rod, such as a billiard cue, has one end placed upon the sitter's forehead just over one eye, and then swung round so that it is at an angle of 45 degrees with the floor and also with the end wall of the studio. The free end of the rod will then be pointing towards the place at which light should be admitted to give the maximum of roundness in the picture. This gives the dominant light, which may be modified to obtain any desired effect, or to suit the physical peculiarities of the individual sitter.

Starting with an aperture, say three feet square, it will probably be found that the lighting is fairly satisfactory but rather too vigorous for most tastes. It is therefore permissible to broaden it so as to give softer shadows, or to admit a lower side light to illuminate deep set eyes or to reduce the shadows in hollow cheeks. An old axiom of unknown authorship sums up the art of lighting in a few words. "Light from the sitter's end of the studio gives contrast (or brilliancy); light from the camera end gives softness." If this simple rule be borne in mind when in doubt as to arranging the blinds, the difficulty will at once vanish. If the blinds cannot be conveniently placed, the same effect can be produced by seating the model more or less under the darkened part of the roof.

As has already been remarked, such variations are necessitated by the differences between one sitter and another, but as a general principle the use of the 45 degree light should be mastered, and other lightings will follow almost automatically. It is important that the operator should feel that he is absolutely the master of his light, and this can only be done by starting with a small dominant light and broadening as necessary. The plan often seen of starting with a flood of lighting and shutting out what is deemed necessary, is a bad one for the beginner, for, as a rule, he will not shut out half enough.

With the knowledge thus gained, the transition to artificial lighting presents no difficulties. The billiard cue will still serve to indicate the position of the dominant light, and the rest is a matter of diffusion and reflection. When a satisfactory negative has been obtained, the face being turned slightly away from the light, the operator should walk round his sitter to see how many different effects can be obtained without moving either light or sitter, the camera being moved into the proper position for each. The next step is to move the sitter so that stronger effects, "edge" lighting or Rembrandts, can be obtained. When the flash is the only possible light, the correct position for it can

be found with the help of an assistant holding a lamp, which should be moved until the desired effect is obtained. A reflector will, of course, be necessary, and this also may be located by the aid of the lamp.

Points to be remembered in artificial light are: the nearer the light is to the sitter the harder the lighting and the shorter the exposure; a single concentrated light requires more diffusion, and consequently more exposure, than the same candle power made up by several lamps placed a little distance apart; reflectors should be placed where they will receive light; half-watt lamps do not retain their full efficiency right up to the time that the filament gives way; no direct light from the lamp or lamps is allowed to reach the lens, an efficient hood or curtain being necessary; and finally, the most rapid plates should be used.

Results, indistinguishable from each other, may be obtained with open or closed arcs, half-watts, incandescent gas, acetylene or even flash light, the only differences being those of length of exposure and convenience in working, so that the owner of any of these installations need not despair of success.—B. J. of Photography.

Roller Inking Bromoil Prints

The usual method of inking Bromoil prints by means of a brush, becomes a tedious business when several prints have to be prepared quickly. Some degree of skill is also needed to obtain a good even deposit of ink on the print, more especially with subjects consisting of a large amount of shadow. These difficulties may be overcome, however, by inking the print with a roller, although the operation is such a terribly dirty job, that there are probably few enthusiasts, even for Bromoil, who will care to undertake it more than once. The whole of the surface is covered with a thin layer of ink, and after allowing the print to become partially dry it is placed in hot water, and its surface gently rubbed with a wad of cotton wool or a brush. The ink now leaves the print in proportion to the image and a straight copy of the original bromide is obtained. This process differs very slightly from the ordinary Bromoil technique, bleaching, etc., taking place in the usual manner. The bromide print should, however, be upon a paper which consists of a fairly stout base; one which will stand the Bromoil transfer process will be found satisfactory. The print having been bleached, fixed and washed, is blotted off between fluffless blotting paper, and laid, film upwards, upon a sheet of glass.

The Ink

For inking any good quality lithographic ink may be used, but it has to be thinned down before it is applied to the print. The best thinning medium is rectified turpentine, not the usual painters' variety, but the purified product sold by druggists. The ink should be rubbed down on a stone or glass slab by aid of a palette knife, and sufficient rectified turpentine added to produce an ink of the consistency of thick treacle. The roller used is the ordinary proofing roller of the printer, and it should be charged by rolling over the ink on the slab several times, until a good coating is obtained. This is then applied to the print and rolling continued from end to end, until the print is evenly coated all over. Practically no sign of image will be seen, the surface of the print being completely covered with the ink. The print is now hung up for a while to allow the turpentine to evaporate. It is somewhat difficult at first to judge exactly when this has occurred, but it may be taken as a guide, that when the paper of the print is barely dry, the ink is in such a condition that further work may be attempted. The print is now placed, face upwards, in water, at a temperature of about 100 deg. F. After soaking for three minutes, the surface of the print may be wiped with a piece of cotton wool or lint, taking care to keep the print under water all the while. The ink will now be found to come away on the wool from the high-lights first, and then proportionately from the half-tones and shadows, and wiping should be continued until the full image has been "developed." As the wool becomes charged with ink it may be dis-

carded and a new piece used. A flat camel hair brush is useful for removing the ink, as it has the advantage of giving a cleaner result, but it soon gets charged with ink, and is rather difficult to keep clean. Several brushes, therefore, would be needed to complete a print of moderate size.—B. J. of Photography.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

CALIFORNIA CAMERA CLUB
July 21 to August 15, 1923

An exhibit of enlargements by Dr. Carl C. Wilson of Palo Alto, who is particularly interested in cloud effects, will be shown after July 21st. Attention is called to the fact that he achieves his charming poetic results without the use of filters or hand work on the negatives.

H. Syril Dusenbery has been appointed as Chairman of the Exhibition Committee starting with the regular monthly entertainment in July. Mr. Dusenbery is planning to stage many elaborate programs at the entertainments in Native Sons Hall in place of the so-called lectures, which have been held in the past. While Mr. Dusenbery has not divulged his plans yet, it is whispered that Moving Pictures will play a prominent part. He has been given a free hand in the matter and promises to put over such entertainment as will not only be acceptable to the Club members, but entertaining and instructive as well. He will keep an accurate record of the attendance at these gatherings and will be guided by the style of entertainment that draws the largest crowd. Mr. Dusenbery is anxious to have suggestions from the members to make this monthly event bigger and better.

Buffalo Camera Club

At the annual meeting of the Buffalo Camera Club, the following men were elected officials for the ensuing year:

C. A. Pierman.....President
Emil Strub.....Vice-President
Lester F. Davis.....Secretary
W. P. Hubbard.....Treasurer

Mr. Pierman has been the treasurer for several years past. Mr. Strub was president of the club three years ago. The secretary and treasurer are new in office, but all have been enthusiastic workers for years, and will be most efficient officials.

The Eleventh Annual Pittsburgh Salon

The 1923 Pittsburgh Salon, completing ten years of exhibitions of Pictorial Photography, was the most successful of any of the exhibitions that have been held annually.

The Photographic Section now desires to extend its thanks to all who have helped towards this success and to announce the Eleventh Annual PITTSBURGH SALON for 1924, which will be held as usual in March, in the Art Galleries of the Carnegie Institute, with an early date in February for the last date for receiving entries.

Entry forms with full particulars and definite dates will be forwarded at a later date. Conditions of entry will be substantially the same as for the tenth Salon.

All communications should be addressed to the secretary.

THE PITTSBURGH SALON,
O. C. REITER, President.

P. F. SQUIER, Secretary
237 Ave. B, Westinghouse Plan.
East Pittsburgh, Pa., U. S. A.

Art and the Crafts

A Department Devoted to the Encouragement of a Closer Relationship Between Photography and the Fine Arts

CERAMIC MINIATURES

by HERBERT DENISON

(The Club Photographer)

One wonders that so few amateurs leave the beaten track in reproducing the work of the Camera. Prints—on gaslight papers mainly—and lantern slides express in general the limits of endeavor, while there is much more to be done in less common avenues which will give much pleasure in the doing and evoke the admiration of one's friends for the beauty of the results.

Why should not one reproduce the portraits of one's family and friends in Ceramic Miniatures, which by their delicacy and beauty charm everybody who sees them? No paper print can give the transparent depth of shadow and delicacy of half tone to be found in a well-executed Ceramic miniature.

Then again, if we have a picture we are really pleased with, why not reproduce it in photogravure? It is quite an Amateur's process and will give a quality to your picture which no light-printing method can compare with.

There is often a disinclination to attempt an unaccustomed thing under a mistaken impression of difficulty, which can be removed by a simple explanation, and I think a brief outline of what is involved in Ceramic work may encourage some few readers to try their hands.

I shall do no more than outline the process because there are handbooks on the subject which will supply working details, and because detail would call for a longer article than is appropriate to this journal.

The special part of the Ceramic process begins after a positive transparency of the subject has been obtained. An opal plate is then flowed over with a solution of honey, gum, sugar and bichromate of potash and dried. The bichromate renders the film sensitive to light in the sense that its attraction for moisture is reduced in proportion to the amount of light received. After exposure to light, which may be daylight or that produced by burning magnesium ribbon, the film is dusted over with a vitrifiable color in the form of fine powder applied with a camel hair mop, and as the film absorbs moisture from the air it becomes tacky and holds the powder proportionately to the protection from light which it has received from the shadows and half tones of the transparency.

When the picture has attained its full strength the surplus powder is dusted off and the film is flowed over with a weak collodion which cements the powder image to itself. While the collodion is still moist, though set, the picture is cut round the edge of the plate so as to permit of its leaving the plate when placed in a dish of water. After a few minutes in the water a corner of the film may be turned up and the whole turned over by the aid of a small paint brush until the collodion side of the film is lowermost. The original film is to be got rid of by solution in water until only the collodion remains with the powder attached. This is done by coaxing the film, still in the water, on to another sheet of glass and transferring it to a dish of clean water and repeating this two or three times, as it is important to get rid completely of the bichromate.

Finally, when sufficiently washed, an enamel plaque is substituted for the glass plate, and the plaque, after arranging the position of the film accurately upon it, is lifted out, when the overlapping edges will fold over on to the back of the plaque and secure it. After the film has dried on the plaque, it is safe to ensure the removal of the last trace of bichromate by letting a very gentle, unbroken stream of water flow over it for a minute or so. When dry, once more the overlapping portion of

the film on the back of the plaque may be removed with a corner of a handkerchief, slightly moistened, and the plaque is ready for firing.

The firing is done in a muffle furnace, which may be heated with gas or electricity, Small furnaces, which are quite efficient, may be obtained for a couple of pounds or so, and the heat required is something under 1,500° F. The plaque is laid upon a fireclay slab, and, after it has got hot by proximity to the furnace, it is put inside. The first effect is for the whole surface to turn black, which indicates that the collodion is being burnt off, but after a while the surface becomes clear and it can be seen that the image has been left behind and now consists only of the vitrifiable image.

As the heat increases, the surface of the enamel fuses sufficiently to admit of the color incorporating itself with the enamel and the firing is complete when the whole of the surface has become as bright as the enamel was before the picture was transferred to it. This can only be ascertained by removing the slab with the plaque upon it from the furnace and examining the reflection of a bright light from the surface; if the shadows are still dull, it must again go back until the enamel fuses still further. Over firing tends to burn the color or make it sink too deeply into the enamel.

The plaques, both oval, round and rectangular, are articles of commerce, but for anyone with a taste in that direction it is not difficult to make them. Make a metal template of the shape required; take some sheet copper as thick as very stout writing paper and by means of the template and a blunt point trace the outline on the copper. The bluntness of the point will ensure that the traced line is fractionally larger than the template itself. Cut the shape out with a pair of scissors, place the template accurately upon it again and insert in the jaws of a hand vice so that both are firmly held together, and with a steel rod burnisher the projecting copper can be turned up on the edge of the template so as to form a shallow tray. The turned up edge should then be filed so as to be even all round. It still remains to give the copper tray its convex form and this is done by laying it face downwards on a concave surface and rubbing it down into contact with a curved burnisher.

Burnishing the copper hardens it, and it is then difficult to bend the copper shape so that its outside edge is in contact all over when placed upon a level surface; but if it be made red hot in the furnace and suddenly cooled it becomes quite tractable, and as the copper requires to be quite clean before covering it with enamel, it is an advantage to slake it in a 20 per cent solution of sulphuric acid, which loosens the oxide and permits of its being readily cleaned with cotton wool and tripoli powder.

The enamel can be purchased in powder form; it should be a soft enamel and fine enough to have passed through a sieve 60 meshes to the inch. It is well to let it stand in diluted sulphuric acid for a few hours to get rid of metallic impurities, and afterwards it must be washed in several changes of water, allowing the enamel to settle in each and then pouring off the water until all acidity is got rid of. In the last washing water the enamel should be agitated, and after settling for half a minute the milky water is to be poured off into another vessel and allowed to settle completely. The enamel in this second vessel will be finer and more suitable for the back of the plaque, while the coarser is used on the front. Some of the finer enamel is placed in water to which the slightest trace of gum has been added and a thin coating of the enamel is spread on the back of the plate as evenly as possible. The plaque is then turned over and the coarser enamel, mixed with water only, spread over it. It is convenient to place the plaque on a block of wood a little larger than itself, and it will be found that the creamy mixture of water and enamel can be made to settle down pretty evenly by tapping the wooden block gently upon the table. The surplus water can be got rid of by laying an old folded handkerchief over the surface, and in its then semi-dry state the enamel can readily be made even with a small pallette knife.

The plaque must now be placed in a warm place—say close to the furnace, until

all moisture is got rid of and it can be placed on a fireclay slab in the furnace, where it will fuse, at first in ridges, but afterwards, as it gets to the melting point, it will settle down into a smooth and brilliant surface, and can be taken out and allowed to cool gradually.

The whole process of making enamels and firing pictures upon them is most fascinating and not too difficult for one with a reasonable amount of manual dexterity.

Our Book Shelves

Photograms of the Year 1922

The Annual Review for 1923 of the World's Pictorial Photographic Work. Edited by F. J. Mortimer, F. R. P. S., London. Paper $2.50, Cloth $3.50.

To many photographers the privilege of being able to visit photographic salons is denied and the only way they have of knowing what is doing in the pictorial photographic world is through the medium of the different publications; to not only them but the great majority of workers Photograms is recommended.

Photograms of the Year is an International Salon in itself, but unlike other salons, it is not an exhibition for a limited time, it is always at your command to be referred to any time and serving as an incentive to producing better work.

Not the least enjoyable part of the book is F. C. Tilney's comments on the pictures themselves. Agents, American Photographic Publishing Co., Boston

P. D. A.

Western Sportologue

Sportologue, a western magazine for sportsmen, has been purchased by the Western Journal Co., Inc., 709 Union League building, Los Angeles, publishers of Western Highways Builder and Western Motorcyclist & Bicyclist; and will be materially enlarged both editorially and in circulation and published under the title Western Sportologue. The field of the new magazine both in editorial scope and in circulation will be that region west of the Rocky Mountains.

Western Sportologue is in the market for photographs of interest to devotees of the following sports—hunting, fishing, motor camping, golf, tennis, swimming, boating—and contributions will be paid for promptly upon publication at rates varying from $0.50 to $3.00 according to the news value of the print. We are especially anxious at this time to secure photographs suitable for covers and will pay for material of this type $10.00 per cover. All material found unavailable will be promptly returned.

Phil Townsend Hanna, Editor.

Gelatin in Photography
Volume 1
Monogram No. 3

By S. E. Sheppard, D.Sc. of the Research Laboratory of the Eastman Kodak Co.

Owing to the almost exclusive use of gelatin emulsions in photography, as the medium or binder in which the silver salts are suspended its properties and behavior are of the utmost importance.

This treatise on Gelatin in Photography should prove very acceptable to the technical chemist or the specialist in collodial chemistry and will undoubtedly be valuable to the photographic emulsion chemist, but the average photographer will hardly find it of value to him unless he should be interested in the scientific or manufacturing side of gelatin for photographic purposes.

Published by the D. Van Nostrand Co., New York City and Eastman Kodak Co., Rochester, N. Y. Price $2.50.—P.D.A.

Practical Color Photography

Author E. J. Wall

This is a very practical manual of the various processes of color photography. Color photography never has been very popular with the average photographer, mainly owing to the difficulty of obtaining satisfactory apparatuses and supplies. Now that it is coming back stronger than ever this volume should prove of great assistance and value.

Although the author explains how to prepare the sensitive plates for the three color process his advice to the beginner in color work to use commercial panchromatic plates is very sound and should be followed. He also explains how to construct a camera for three color work. Of course, if one does not wish to construct or purchase a camera they can make use of the sliding back, but this method limits one to subjects in which there is no movement.

The most popular of all the color processes is undoubtedly the screen plate. The Lumiere Autochrome and the Paget Plate are the two best known and Mr. Wall's treatise on them is very complete.

The making of three color lantern slides is also fully dealt with as is also several of the other processes, such as the three color Gum-bichromate Process, the Bleach-out Process the Lippman Process and the Seebeck Process. A chapter is also given to Cinematography in colors and its future possibilities. The volume is recommended to all interested in color photography.

Published by the American Photographic Pub. Co. Price $3.00.—P. D. A.

The New Photographer

Editor Geoffrey E. Peachey

This is a new photographic magazine, published in England. We have enjoyed seeing the first two copies. It is well illustrated and contains interesting articles on nature studies and photographic subjects that should appeal to the amateur. Published weekly by The New Photographer Ltd., 41 North John St., Liverpool, England. Price 2d.—P. D. A.

The Condensed List of Imperial Manufactures and the Imperial Handbook 1923

The Imperial Dry Plate Company have for many years past made a practice of issuing annually the above mentioned booklets.

The 1923 edition of the Handbook is very interesting and well up to the standard set by its predecessors. Within its covers are well written and illustrated articles on Flashlight Photography, Imperial Roll Films, the latitude of Imperial Plates, Lenses and their characteristics, Clouds and the Imperial Graduated Filter. Copies will be gladly sent post free on receipt of a post card addressed to The Imperial Dry Plate Co., Cricklewood, London, N. W. 2.—P. D. A.

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892—Dr. W. E. Ziengenfuss, 118 N. Palm St., Anaheim, Calif. (Was Fern Hill Sta., Tacoma, Wash.)

4551—Frank E. Green, 230 Orchard St., Auburn, R. I. (Was 14 Kimball Ave., Pawtucket, R. I.)

WITHDRAWAL

E. D. Miller, Apartado 945, Havana, Cuba.

Notes and Comment

Reported by Wm. Wolff

O. Hagman, Watsonville's leading photographer, spent a few days in San Francisco during the 4th of July.

Leopold Hugo of Santa Cruz, is showing some wonderful scenic portraits.

G. C. Hulse of San Jose, has put in a large line of Radio goods.

Bert Crandall of Palo Alto, called the other day.

Kenyon & Crow of Palo Alto, seem to get the prettiest girls for their finishing department.

F. J. Shinnera of Long Beach has returned from the East. He attended several Conventions while there.

Jos. Hubbell and Wm. Stapp of the International Newsreel Corp of Los Angeles, passed through San Francisco on way to Shelby, Mont.

H. A. Parker of Pasadena has entirely recovered from his third flu attack.

Prizes Announced for The Emporium Third Photographic Exhibition

$100 will be the award to the photograph judged best in the Third Annual Photographic Exhibition of The Emporium, which has been announced for the period of September 28th to October 6th. The other prizes to be given, according to the management, are: Second prize, $50. Third prize, $25, two prizes of $10, three prizes of $5 and a special novelty prize of $25 for the best picture of the Emporium building. The latter prize promises to draw scores of entries in addition to those competing for the other awards.

Departing from the practice of using their Assembly Hall for the Exposition, the management has decided to allot a liberal space, properly arranged, on the first floor of the building for the displays. This it is felt, will bring the exceptional pictures to the attention of many more thousands of people.

Extension of Burroughs Wellcome Co's Premises and Offices in the U. S. A.

It is less than sixteen years since Burroughs Wellcome & Co. commenced manufacturing in the U. S. A. The business of the well-known producers of 'Tabloid' Photographic Chemicals has progressed rapidly and recently and necessitated considerable expansion of their New York offices. The firm accordingly acquired a site at 9-11 E. 41st Street, almost opposite the old offices, and upon it has erected a twelve-story building. The lower part of the building is now occupied by the firm as its General Offices for the U. S. A., a large portion of the ground floor being utilized as an Exhibition Room for the display of 'Wellcome' brand fine chemicals, 'Tabloid' brand medical equipments, etc.

The new building is in the Gothic style, and has been designed on simple, dignified and graceful lines. Each floor of the building is equipped with the most recent improvements in plumbing, heating, lighting and high-speed elevators. Light and ventilation are assured permanently on three sides.

Burroughs Wellcome & Co. also occupy offices and warehouses in Chicago to facilitate the distribution of their products in the Middlewest and West.

In the Market for Prints

The Wollensak Optical Company, Rochester, N. Y. are in the market for some good prints made with the Wollensak lenses, principally The Vitax f-3.8, Verito Diffused Focus F-4 and their various Velostigmat lenses.

The Holly Tood Studio Moves

The Holly Todd Studio will move from 492 Sutter Street, into their new quarters at 439 Powell Street, San Francisco, about August 1st.

The new studio is almost directly opposite their old one and gives them more sunshiny quarters, which in turn will mean more business for them.

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CONTENTS FOR SEPTEMBER 1923

Cover Design—Giant Cactus ..... By W. R. Potter
Miss Jean Traig (Frontispiece) ..... By O. J. Smith
Five Portrait Lightings ..... By O. J. Smith 405
Cyko ..... By Sigismund Blumann 410
Advertising Illustrations ..... By L. G. Rose 414
II—The Ideal Photographic Printer ..... By J. G. Pratt 421
Forthcoming Exhibitions, 1923 423
Sidelights of the 1923 Convention at Washington, D. C. ..... By P. Douglas Anderson 424
Record Keeping with the Hand Camera ..... By Dr. H. D'Arcy Power 426
Handwriting Expert Chauncey McGovern 431
A Home-Made "Hispeed" Enlarger ..... By D. Peterson 432
Removing Emulsion from Glass Negatives ..... By R. L. McColm 434
Funeral Cortege of President Warren Gamaliel Harding ..... By Morton & Co. 435
Editorial 436
The 1924 International.
For the Professional 438
Meeting of the Photographers' Association of California.
The Amateur and His Troubles 445
Which Camera Shall I Choose?
A Photographic Digest 447
Modified Copper Toning—The Small Reflex Hydrocoerulignon Developer—Reproducing Stained Films.
Gluing Leather on Cameras ..... By R. L. McColm 448
International Photographic Association 449
Notes and Comments 450
Club News and Notes 452

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MISS JEAN TRAIG

By O. J. SMITH
San Francisco

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A PHOTOGRAPHIC MONTHLY

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P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX SEPTEMBER 1923 No. 9

Five Portrait Lightings

By O. J. Smith

With Illustrations by the Demonstrator

(This demonstration was given before the Photographers' Association of California on July 2nd. It proved to be so interesting we are reproducing it here in full.)

Before Mr. O. J. Smith of the Eastman Kodak Company made his demonstration, he described the Halldorson Electric Cabinet in a very interesting way, indicating that it was, from a photographer's point of view, a very good imitation of daylight. For the models, Mr. Smith used two distinct types—Miss Metcalf, a brunette young lady in a brown dress and Miss Jean Traig, a very light blonde young lady in a pale pink dress.

With Miss Metcalf as a model, he showed the use of the light reflector in relieving the depth of tone on the shadow side of the face, producing the necessary roundness caused by the shadow being graded back.

Miss Metcalf in Pose No. 1

Mr. Smith went on to say: it is the grading back of the shadow that produces this roundness of effect. It is just as necessary to blend shadows into the light as to blend the light into the shadows, and for this purpose we use the black gauze screen. By building up the light in this way we have concentrated the high lights on the high points of the face, and by blending a delicate shadow into the broad flat light, we have produced a half tone on the light side of the face. Without this we would have flatness instead of the proper depth of tone. By introducing a little half tone and relieving the flat light on the light side of the face, we have produced fairly good modeling.

I am not going to attempt to tell you just exactly what to do with any one customer—that would be interfering with your individuality—

MISS METCALF IN POSE NO. 1

but just to give you a little idea of the fundamental principles of lighting, which you may take home and use to suit yourselves.

Miss Metcalf in Pose No. 2

The light, as you see, is three quarters back and the reflector almost directly in front of the model. With the reflector we endeavor to carry the direct light over into the shadow so as to balance the shadow side with the light side of the face. On account of the different positions of the audience in relation to the subject, it is difficult to show exactly what is required, with the camera in a certain position. And then the black gauze screen comes into play to produce a little half tone, thus concentrating

MISS METCALF IN POSE NO. 2

the light on the face. This lighting shows the outline of the nose and the cheek in proper proportion.

Miss Jean Traig in Pose No. 3

The spotlight has done a great deal to get rid of unconcentrated lighting. It enables us to contrast the strongest light with the darkest shadows, if we so desire. The rest of the picture is therefore in half tone. Sometimes those effects are printed in, but I do not like them as well done that way. If you strengthen the high lights by artificial means you, of course darken the shadows around them by contrast.

The spot light is on the face coming from side of background, re-

MISS JEAN TRAIG IN POSE NO. 3

flector at model's back, and black screen toning down light on body. There is a little too much light, so we will use the dark screen. Do you notice how the screen takes off the hard lighting on the shoulders, which interferes with the lighting on the face? The high light will look more brilliant now that the general light on the face has been softened down.

Miss Jean Traig in Pose No. 4

The model is turned facing front, spot light shining from the side, and the reflector almost in front. We will now lower the dark screen a little, which will allow more light to fall on the shoulders. It is well to begin your portrait lighting by first arranging the light so that the

MISS JEAN TRAIG IN POSE NO. 4

face and figure generally is in half tone. This soft light on half tone effect forms a background for the highlights and a foreground for the shadows.

Then introduce a little fairly direct light from a source which renders good modeling and use just enough reflecting light to render detail in the deepest shadows which appear only after introducing the direct light.

Miss Jean Traig in Pose No. 5
(Frontispiece)

The background is light and I am using no spotlight, (model is placed showing side-face; reflector in front of model, background toning

shoulders, light three-quarter back.) If I had a studio of my own I would have neither a black nor a white background, at least not with the idea of reproducing them as such. There is no atmosphere in white or black, and the background should represent atmosphere. If we use a white background and turn it away from the light it will be toned down, and if we turn a black background towards the light it will photograph in a better key. This method enables us to introduce a little graduation into the background where it is needed to balance and relieve the figure.

But the solid black or white should not be used in producing portraits. Sometimes we see small children taken with a solid black background, but you would not put a child into such a dark room as that. You have a nice, bright, airy little subject, one that enjoys the sunlight, and plenty of it. If you use a dark background, it is better to do so only when photographing older people, and then be careful not to have it quite black. It is out of place in portraiture. It is better to have a background in middle tone.

Cyko

By Sigismund Blumann

Few consumers of photographic material and not many old timers in the art recognize in the trade name Ansco one of the oldest established concerns of America and that old friend the Anthony Scoville Company. Yet An(thony) Sco(ville) Co(mpany) meant as much in the history of photography and the trade thereof as Eastman does now. This establishment issued the early American Annuals so dear to the heart of the Spartan pictorialists and hard-worked professionals of a past decade. Ninety per cent of the portrait galleries were equipped by A. S. & Co.

Time and its vicissitudes wrought changes in photography and in the merchandise pertaining thereto. Snap-shooting and gas-light papers superseded wet-collodion and Solio. Everything speeded up. The film made Eastman, Eastman made the Kodak, and therefrom grew the greatest photographic concern in the world. In the shadow of this stupendous establishment the Anthony Scoville Company seemed eclipsed. It was only an eclipse, for quietly the men bred to the business worked, kept step to the time of the year, and advanced—quietly but materially and substantially. Cyko paper came into prominence, had and has a very large following, and maintains a place with the best in its class.

Then came the vogue of enlargements. Projection became the almost invariable method of pictorial printing. Now most commercial and portrait photographers use the lantern in preference to contact and Cyko holds an enviable place among so-called enlarging papers. It is one of the

NO. 1 "A BEDTIME SPREAD." Photograph by W. R. Bradford, Philadelphia
Illustrative of Article by L. G. Rose on Page 414

pioneer rapid chlorides, and one of the main purposes of this article is to make clear the difference of chloride from bromide in results, not constituents.

The advantages of chlorides over bromides are several and decided. Professionals find it quite essential to use the former on account of these characteristics. They show a richer deposit, the blacks are better, softness is obtainable without loss of crispness, contrast is snappier and the scale of tones maintained withal. This brilliancy distinguishes a chloride from a bromide print at a glance. Whether experts in exposure and chemical manipulation may not do as well with the faster papers is not to the present purpose. Ease of procedure and assured results appeal to the mass of those whose main interest and profit lies in these very things.

The pictorialist with his infinite variety of lighting, exposure, and development—infinitely varied in the final result as to subject, density, and quality, is compelled to be catholic in his choice of papers and were it not for the chlorides should be hard put to produce salon prints from his favorite negatives. These papers are slow enough to permit dodging and other devices, yet sufficiently rapid for projection purposes. They

permit handling and developing in a brighter light and have infinitely more latitude. Which leads us to our subject. Cyko enlarging papers are standard and offer a variety second to none. But this were faint praise in itself. The outstanding feature—and a point we tried to score forcibly in the preamble to this series—is its individuality. Cyko paper in the same named surface and the same graded speed is not the same as another. It gives something characteristically distinguished and distinguishable as a Cyko enlargement. Many like it better than any other, some not so well. Well known as it is, there are photographers who do not know it at first hand: have never tried it. The object of these articles is to induce all to try every brand in the great variety of each, carefully following the maker's directions before venturing on methods of their own, fit the paper to the negative, and the purpose, and then to arrive at a choice and a decision.

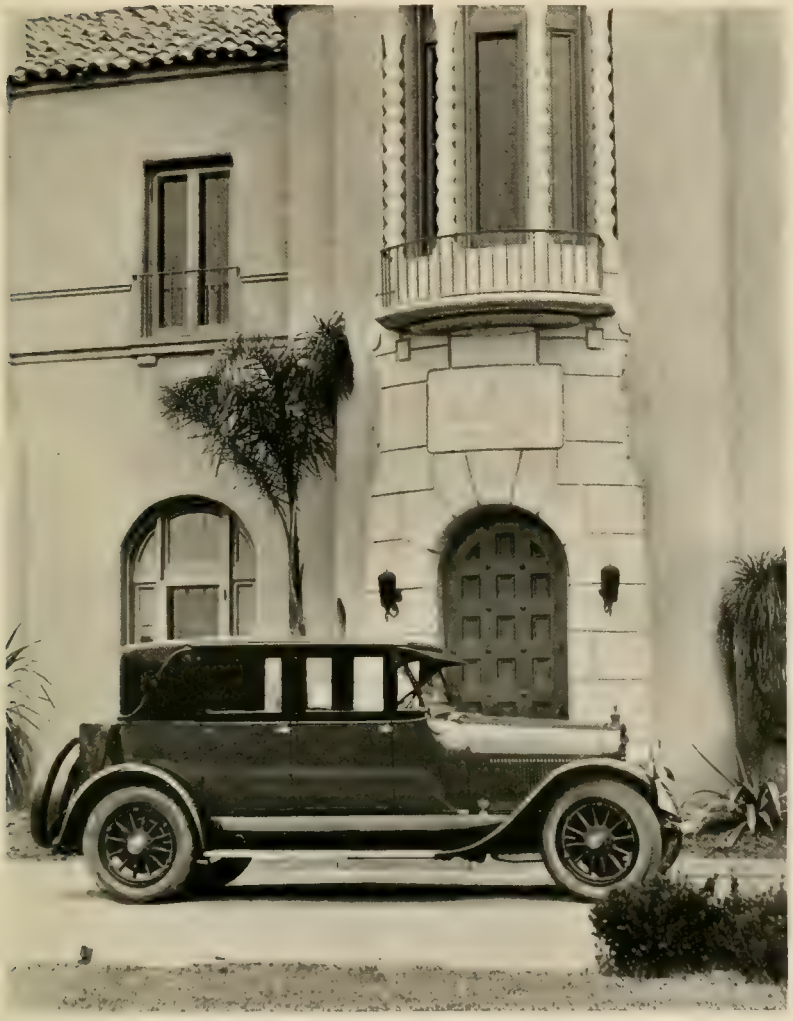
These manufacturers are investing not only millions of dollars, but large portions of their active lives, ambitions and ideals to produce superlative things for us and we owe it to them and to ourselves to become informed. Progress comes about thus. I may have said something of this sort before, and very likely shall say it again. It bears repetition. It is the truth and Truth is good at all times and bears reiteration.

I am not familiar with the Ansco distribution or their sales machinery but presuming that the purchaser knows where to get properly kept and fresh stock and that the reputation of the firm assures all was right when packed, am now ready to speak of such surfaces as I think from careful experiment deserve detailed mention. The grades omitted or glossed over are by no means to be held lightly. The fact is, it is impossible to reprint a maker's circular on these pages, and the reader can always get lists, prices, and the material itself where such things are sold, or from the makers.

The favorite Cyko surface will always be Plat, which comes in single and double weight and in white and buff, and Studio single and double, white only. The latter is what is generally known as velvet or slight sheen. Then there is a very serviceable glossy for the commercial photographer and a linen surface in white and buff for the amateur and fad worker.

My own experience has been principally with Plat and not only was the finished print beautiful as to surface and tone, but the working was a delight. The image appears promptly after any reasonable near correct exposure and builds up just slowly enough to allow for the stop bath in case of over exposure and with sufficient rapidity to avoid fogging or loss of patience on the part of the paper and the printer respectively. On this surface the sepia toning gives a remarkably rich result and when developed with the Pyro-Ferri cyanide formula etching blacks or browns are easily obtained.

Aside from the merits of the paper itself, Cyko always holds a sen-



NO. 2.—PHOTOGRAPH BY MOTT STUDIOS, LOS ANGELES
Illustrative of Article by L. G. Rose on Page 414

timental attachment for me. I have followed its vicissitudes the while my own vicissitudes photographically and otherwise transpired. It has toiled so modestly, patiently, and persistently upwards on its way that this assures somehow a reliability based on conservatism and the natural quality of the conservative to avoid clap-trap, talking points, and experimenting at the expense of the user.

Advertising Illustrations

By L. G. Rose

Author of The Commercial Photographer

One of the most interesting—and what can be made one of the most remunerative branches of photography—is the making of photographs for advertising. Magazines, billboards, street car cards and manufacturers' catalogues offer outlets for large quantities of such photographs. And while, oftentimes, the advertisements are not completely photographic, photography plays a big part in their composition. It is a large field, and would be still larger if more of the proper photographs were available.

There are several concerns now throughout the country who are specializing in this particular work. Nearly every photographer has the equipment necessary for doing this work in a limited way and, if he only thought so, has the ideas. It is more or less a "state of mind," but I have personally known quite a few photographers to start off along this line with a loud whoop and a hurrah and then fall as flat as the proverbial pancake. It is not an easy business to break into. It ordinarily requires intensive thought, highly developed skill in all branches of photography, a thorough knowledge of plates and papers, as well as a grounding in advertising, salesmanship and general merchandising, for complete success.

The commercial photographer usually has more of these requirements than the portrait photographer but, on the other hand, the latter will probably have more of the artistic skill than the commercial man. Then, again, in times gone by, the amateur, with no training in either branch, but with a highly developed training in advertising or salesmanship, has walked off with the big prize.

Why not make it a side line or, if you will, a hobby and make your spare time and your dull times pay a dividend and gradually work into it for I can say, from my own experience, that it is intensely interesting and a splendid diversion from the average photographer's routine.

For ideas, in getting started, the acquirement of a collection of published advertisements of various kinds is a big help and if you are in a manufacturing district, a collection of the advertisements being used by the local manufacturers is also desirable. If possible, also include advertisements made up by commercial artists as well as those photographically done because the commercial artist and designer is your strongest competitor.

While the majority of advertising managers agree that photographs have more appeal than drawings, nevertheless, they still use many drawings. A drawing can be executed and complete plan started over night,

NO. 3.—PHOTOGRAPH BY KAUFMANN & FABRY COMPANY, CHICAGO

oftentimes, while with photographs it means the selection of location, models, etc., and then some art work, all of which slows up progress. Then, the manager may want to exaggerate some point, or perhaps show his product to better advantage than could be done in a photograph and this can be much more easily accomplished by an artist. Also, the artist can change the prospective at will, something not always possible in photography.

Study these advertisements carefully and plan how you would make them. Go to your public library and get a book on Psychology of Advertising and another on practical advertising. Learn all about construction, lay-outs, page size, type size, etc., and also make the acquaintance of a good commercial artist as he can be of great help to you and can show

you just how an advertisement is brought into shape for that is his business.

Practically the whole subject of advertising and, incidentally, the success of photo illustrations, is founded on and closely connected with the science of psychology. It is knowing the way people think and reason and how to mold their opinion to your opinion, so the more time and thought you can give to this matter of psychology the better your chances are of success.

The kind of apparatus you use really makes very little difference. It is knowing how to use that apparatus that counts. Some of the best operators use small cameras—4x5, or thereabouts—and enlarge practically all of their stuff while, on the other hand, many who are professional photographers make practically all of their stuff 8x10 and then enlarge or reduce accordingly, but it is because their apparatus happens to fit into that size. Both sides have their advantages. Take, for example, an 11x14 contact print from a good, or even fair negative, and compare it with an 11x14 enlargement of the same subject, same lighting from a 4x5 or a 5x7 negative. However it is not often that results are thus compared and this disadvantage is more than offset by the use of longer focus lenses on the small camera which gives the enlargement much better perspective than the average large camera lens. Also, there has been a great increase in the variety of surfaces and contrasts in enlarging papers, available. A 5x7 view makes a good all-around outfit for this work. I say "view outfit" because it generally has a larger front board for the accommodation of lenses of various types and also has ample swing, rising and falling front, etc.

The choice of a lens is also a matter to be given careful consideration. Soft focus lenses are great favorites these days and are not expensive. However, if you are to have but one lens, it would probably be much better to buy a high grade anastigmat of as long a focal length as probably could be used on your camera—at least double the long way of your plate, that is 10 inches for 4x5, 14 inches for 5x7, etc. That will give much better all-around results than a lens of shorter focal length such as would ordinarily be supplied with a camera of the particular size. The resulting prints could then be diffused either during projection or in contact printing.

While the requirements above outlined may seem to call for an exceedingly long focus lens, it has been my experience that the pictures made with such a lens are more liable to please everybody concerned. There are times, however, when a short focus lens or even a wide angle lens is necessary in making some of the so-called freak effects.

For a diffused focus lens, the Verito is very popular both for enlarging and the making of negatives and some of the single lenses are favored for purposes of diffusion.

NO. 4. PHOTOGRAPH BY KAUFMANN & FABRY COMPANY, CHICAGO

While on the subject of lenses, there are many attachments brought into play by movie camera men which are very useful in this work, among which may be mentioned attachments for diffusing part of a picture, fog filters, double exposure attachments, vignetters and lens shades, the latter enabling you to photograph almost directly against the light.

The kind of plates or film you will select depends entirely upon the subject at hand. Each brand of plate or film has its own individual characteristics as to contrast, speed, orthochromatic properties and fineness of grain and it is here, as well as in exposure and printing that one of the fascinations of this work comes in—to train oneself to see subjects photographically and then record those subjects in black and white —something that takes time, patience and skill to acquire.

Advertising photographs to be used for reproduction should either be printed on a glossy paper or an absolutely dead matte surface paper but it will often be found that, in selling a picture, a print on a rough surface paper will appeal more to the customer and while it has not a good reproducing surface it does get by. However, the large majority of this work is better printed on the first mentioned surfaces unless it is a subject requiring considerable art work.

To get back to equipment—you will need flash lights, spot lights and some form of a flood light, that is, if you are going into it extensively. There is a great deal of difference between an arc flood light and an incandescent flood light. While one is good for some things, the other will do it better. Personally, I like an arc flood light for model stuff and an incandescent light for merchandise, as the arc type, for an equal volume of current is faster.

If you attempt work using models, there is the proposition of getting suitable subjects. In the large cities the theatrical agencies, art and dramatic schools furnish the material. In the smaller towns, the portrait and commercial photographer have unlimited opportunity to pick them up in going about their work, but are they really suitable? There are certain people with personality who, while they may not be beautiful to look at, photograph like a million dollars and at the same time have sufficient dramatic ability to carry the story over. The ideal model is hard to find. You can get just models, but the real thing is rare.

In the large cities, there are professionals who make a specialty of photographic work, both male and female, but even they fall into what are known as types—one model, for instance, will make a good housewife but not a good society woman and one that would make a good society woman might not make a good maid. Suitability of type is a very important point and will make or spoil an advertising photograph. Many of the leading commercial and advertising photographers keep files of models, together with their photographs.

An advertisement in a paper, one would naturally think, should bring results. From my own experience I can say that it only brings trouble and disappointment as they will come in droves, and out of twenty-five or thirty, you get probably one that may be of some use to you and then only after a lot of work and many ruined plates.

In all work using models, there is one point that must not be neglected and that is the securing of a release. All manufacturers and advertising agencies will require a release before they will purchase your work and a good short form for this purpose is as follows, although it might be well to have your attorney go over it and see if it conforms with local as well as State requirements:

NO. 5.—PHOTOGRAPH BY KAUFMANN & FABRY COMPANY, CHICAGO

Date .....

In consideration of.....dollars, receipt whereof I hereby acknowledge, I hereby sell and assign to..... the exclusive right to copy and reproduce the.....in any manner whatsoever, and to secure copyrights for all such reproductions.

Signature .....

Signature of witness.....

Now to take up a few examples:

Illustration No. 1. "A Bedtime Spread," is a study in still life—made with a Verito lens—that would readily work into a billboard or poster advertisement, as it has a broad treatment that most nearly meets with that old advertising axiom "To tell a story so that he who runs may read." This is a simple little rule which, if consistently followed, is almost sure fire.

In illustration No. 2, is an example of local newspaper advertising, the bold lighting lending itself very readily to the coarse screen of a newspaper halftone.

In No. 3 is shown a good example of magazine copy for piano-player advertising.

Illustration No. 4, of the sweeper, would be good for street car cards

NO. 6.—PHOTOGRAPH BY KAUFMANN & FABRY COMPANY, CHICAGO

as well as magazine advertising. You will notice a little of the advertising psychology here—Association—the sweeper in surroundings evidencing a high-class home. Would also call your attention to the lighting, throwing the sweeper into bold relief.

With regard to illustrations No. 5 and No. 6, study them over and see if you can connect them up with a catch phrase—this is ordinarily the test of a good advertisement.

The commercial photographer, in going about his work among the manufacturers, has wonderful opportunities for picking up ideas for advertising photographs. Every manufacturer, if he is interested in his product—as is usually the case—thinks of his product as his baby. I recall doing work for one candy manufacturer who had all his packages and con-

tainers, filled with his product, in his office, and most of his spare time was spent in arranging and rearranging them in various positions. They were his babies and had to be shown off before every caller that came in. One package was a container for wrapped candy kisses and was one of which he was particularly fond. There was my cue and I promptly made it the subject of an illustration which was sold with no trouble. In fact, it was so easy that my only regret was that I did not charge him more.

And so it is, every progressive manufacturer and advertising manager is searching for ideas and ways to push goods. There is no set rule that can be applied to ways and means of securing this work and doing it, and as stated before, about the best procedure is to get as close to them and their product as possible, study their advertisements and try your own hand at it, for it is interesting, fascinating, and can be made very remunerative.

II. The Ideal Photographic Printer

Copyright J. G. Pratt, 1923, Washington, D. C.

With Illustrations by the Author

In the previous issue of CAMERA CRAFT we gave detailed specification for the construction of a home-made printing machine and made rather broad claims as to its efficiency, and it is the purpose of this article to set forth in as simple a manner as possible, just how these various operations can be performed.

Operation

The ordinary operation of this machine, that is, for printing negatives straight as one would do with any commercial printer, is so simple as to require little or no discussion. You merely place the paper and negative on the plate glass, bring down the top into contact with just a slight pressure of the hand, and at the same time press the floor switch with the foot until the proper exposure has been given. Then release the switch and let go the top. The hand and foot soon work in perfect harmony, and the spring release of the top makes the machine about twice as quick of operation as one worked with a lever which has to be locked and unlocked for each exposure. In kodak-finishing an average of one hundred and fifty prints an hour can be maintained without difficulty, and the average is much higher where numerous reprints are required from each negative.

Tissue Paper Shading

Most of you are already acquainted with the art of shading your prints with tissue paper on the regular printing machine, and this can

be resorted to in the usual way by lifting the plate glass and placing the tissue on the clear glass underneath. If the negative is graded from dense on one end to thin on the other, as often happens in commercial work, such as you might encounter in an interior where the light was strong near the window, and thinned out into the shadows,—this can be corrected in an instant by placing the tissue, sometimes a double thickness, to cover half or more of the ground glass. This being five inches under the negative gives the effect of a long range vignette.

Hand-Hole Manipulation

In some cases tissue paper shading will not answer as one piece is not sufficient and two pieces would hold the shadows back too much. In such instances we manipulate the shading process through the hand-hole by holding under the negative various forms of masks. These are made in an instant as you need them, and although at first you may spoil a few sheets of paper in judging two exposures instead of one, you will be well rewarded with a well balanced print.

Suppose the sky is a little thin and tends to print muddy or mottled. Merely hold a short distance under the negative a sheet of paper large enough to cover this portion of the picture, and remember the closer the mask is to the negative, the shorter will be the range of diffusion. If the foreground takes, we will say, four seconds for a proper timing, draw the mask off after two counts and release the switch at the fourth. Likewise, if the clouds are rather dense and should be brought out more prominently, proceed as before but with the shading proposition reversed.

Printing Out a Highlight

Suppose you are printing a group and one or more faces are in the direct rays of the sun and consequently too dense to print with an exposure which would take care of the rest of the picture. Place a sheet of paper over the negative and trace the outline of the portions which require over-printing. In some cases of clean-cut areas the outline should be made about a sixteenth of an inch inside the actual portion to be brought out. Now cut out these portions with your manicure scissors and hold the mask into position close up under the negative until they have been given the proper amount of over-printing. Then, without releasing the switch, draw off the mask and print from the whole negative. This is not half as difficult as trying to dodge with a printing frame, as in the latter case, especially with a somewhat dense negative, the highlights are hardly discernible.

A little practice will be required in judging the proper distance under the negative for the mask to give the desired vignette, although it is not at all difficult and when properly executed will enable you to make an evenly lighted print without the slightest traces of manipulation. Further than this, duplicate prints can be made exactly alike, which cannot generally be done in dodging with a printing frame.

Holding Back The Shadows

In cases where a portion, such as a face in a group, or the shaded side of a house, is in a shadow and should be held back, various methods can be employed and they all have their uses. The oldest and the easiest is to place a piece of tissue paper of the proper size and shape on the clear glass just under the plate glass, and print in the usual way. Often, however, this holds the shadow back either too much or too little, and is therefore impracticable. An excellent method is to give this portion on the glass side of the negative, or on the back of the film, a thin coating of Prussian blue, or blue crayon (the kind used for marking china). If this is not sufficient another coating can be given on the film side, and if you get it on the wrong place it rubs off instantly with a tuft of cotton. Unless the negative is exceedingly thin, either the Prussian blue or the blue crayon will blend itself off into the picture with no unpleasant suggestion of manipulation.

Sometimes, however, both of the above methods fail, and we must once more resort to the hand-hole. Cut out a piece of paper the size of the portion to be held back; stick this on the rubber end of a lead pencil with a thumb tack, or otherwise as desired, and hold it up under the negative, experimenting until you get the right elevation and the correct exposure.

Each one of these difficult problems in shading which you work out is a point gained in your efficiency, and in time the proper method will be seen at a glance and performed quickly.

Shading Process Made Visible

With this printer, when desirable in many forms of commercial and scientific work, you can employ any of the above methods of dodging and actually see the operation. This is performed by holding the sensitive paper in contact with a sheet of clear glass, and with the switch thrown on, you eliminate all guess work as you can see just where you are holding the mask. This method is of inestimable value in many scientific subjects which the writer has to photograph, and necessity was the mother of the idea.

FORTHCOMING EXHIBITIONS, 1923

September 10th to 15th (Incl.).—International Exhibition of Pictorial Photography, New Westminster, B. C., Canada. Last day for entries, August 31st. Particulars from Secretary, D. E. MacKenzie, Hart Block, New Westminster, B. C., Canada.

September 28th to October 6th.—The Emporium Third Annual Photographic Exhibit. Last day for receiving prints, September 20th. Particulars from Emporium, Photographic Exhibit Department, San Francisco, California.

October 15th to November 5th.—The Seventh International Salon of Photography, under the auspices of the Camera Pictorialists of Los Angeles. Last day for receiving prints September 26th. Particulars from N. P. Moerdyke, Secretary, 811 Washington Building, Los Angeles, California.

November 5th to 17th.—Frederick & Nelson 1923 Photographic Exhibition, Seattle, Washington. A prospectus will be sent to those interested upon request.

Sidelights of the 1923 Convention at Washington, D. C.

By P. Douglas Anderson

The 1923 Convention of the Photographers' Association of America is now an event of the past, but its influence will be felt throughout the coming year. A photographic convention is great medicine; it not only brings together for you the latest in photographic apparatus and material, but your surroundings and associates give you pep and enthusiasm.

That is the reason why we of California worked so hard during the last Convention, and are still working to get the 1924 Convention for San Francisco. The logical time for the P. A. of A. to come West is now. We are ready to welcome them. The manufacturers were well represented and their exhibits were very fine. Photographers as a whole should realize that a convention is a mighty fine place to visit. Not only are you able to compare one manufacturer's line with another, but you get first-hand information and instruction in the working of the various apparatus that is shown. The instruction and information obtained will undoubtedly save much of your time, money and material, to say nothing of your temper. There were several new lines shown, the artificial lighting equipment being very effective. There was also a new automatic printer and a new automatic timer which could be attached to the printing machines. Another firm had a machine for fixing prints worked on the same principle as the rotary drum print-washing machine.

The lectures and demonstrations were exceptionally good. All were different and right up to the times. Miss Peggy Stewart showed the reason why she was meeting with so much success in her photographing of children and young people. Walter Scott Shinn was also very entertaining as well as practical in his demonstration. He certainly knows how to win the confidence of his child subjects. T. E. Mock knows how to put a demon-

stration over. He dealt very strongly with simplicity in lighting effects to get best results. His handling of the spot light was a revelation to many; it was simple, the way he worked it. He is right. When one makes a hardship and a difficult job of handling the lights they are on the wrong track and had better stop and commence over again.

Howard D. Beach gave a very interesting talk on the art side of portraiture, illustrated with prints he selected from the exhibit. He knows his subject and also knows how to present it.

Nickolas Muray's demonstration was all that it was said it would be. His draped models and his manner of lighting and posing them was a real treat. He is a master in his own line. Frank Scott Clark showed why he is successful with his studies in draperies.

The commercial demonstrations were very capably handled by W. A. Bartz, Harry Devine, L. T. Ryder and others. Camera Craft will publish articles written by the different demonstrators during the year.

The exhibition of photographs was very good and well repaid the time spent in studying them. Great Britain had a fine collection of work, as had also California.

The cup presented by the California delegates was won by the firm of Kaufmann and Fabry, commercial photographers, Chicago.

If you were to ask me who was the most popular man at the Convention, I would answer James E. Reedy, of the Manufacturers' Bureau, better known as Jimmy Reedy.

The executive board for next year is as follows:President, Clarence Stearns, Rochester, Minn.; first vice-president, Wm. H. Manahan, Jr., Hillsboro, N. H.; second vice-president, J. H. Brakebill, Knoxville, Tenn.; treasurer, Alva Townsend, Lincoln, Nebr. Mrs. Howard D. Beach was elected chairman of the Woman's Auxiliary and Mrs. James Reedy secretary-treasurer of that organization. James E. Reedy was re-elected chairman of the Manufacturers' Bureau, with Mr. Perkins, of the Photogenic Machine Company, secretary. F. Leigh Wyckoff, of Detroit, was elected chairman of the Commercial Section, with Harry Devine, of Cleveland, vice-chairman.

Record Keeping with the Hand Camera

By Dr. H. DeArcy Power

With Illustrations by the Author

I suppose that many users of the camera have at some time or other employed this instrument for copying things they wished to preserve. Years ago when I came across a desirable page or two of music in the possession of a friend I pinned it against the wall, took a shot at it and made a bromide enlargement from the negative. Sometimes the result was good, quite often otherwise. I admit that the procedure was more troublesome than the accepted way of borrowing such trifles and forgetting to return them—but apart from questions of conscience it left my friend's music open to further investigation. At a later period I needed copies of large bacteriological charts of complex character for distribution among my class. Using glossy Velox these could be reduced to carry in the pocket and still be legible. Last year traveling in Europe, I more than once had the police take possession of my passport, leaving me for the time without the means of establishing my right to travel and on one never to be forgotten occasion a heated discussion with a minor official led to such mental disturbance that I departed leaving behind me my pocket book, pass, letters of introduction and all my money. It was fortunately in Germany, or I might have enjoyed lodging in jail as a foreign vagrant. That little experience led me to the determination of carrying reduced photographic replicas of all important papers when traveling. The manner of doing this may be of general interest—hence this paper.

The copying of documents by photography is now a commonplace. It is the practice of the U. S. Government, and is provided for by such instruments as the Eastman Photostat, also my own "Photographic Cabinet" gives perfect results when so employed. I described this in the May, 1916 Camera Craft. But I am here seeking something different. —I want reductions to be made anytime and anywhere, with the minimum of time and cost and the simplest of apparatus. I hear someone say, "Well, why not pin your original against the wall and take a shot at it?" It sounds easy but it does not work. First we want a reliable copy. That means for average handwriting and print a reduction not exceeding one fourth, better one third. The latter would permit the copying of a page of the "Literary Digest" by a quarter plate camera (see Fig. 1). This involves a near approach of camera to subject, with a five inch lens about fifteen inches. At this distance the angle between the lens and the edge of the document is acute, and the illumination must be accurate. Even lighting of a black or white surface looks easy, but is not. Lastly letters and documents to be copied have, more often than not, been folded, unless you put them under a heavy glass plate they

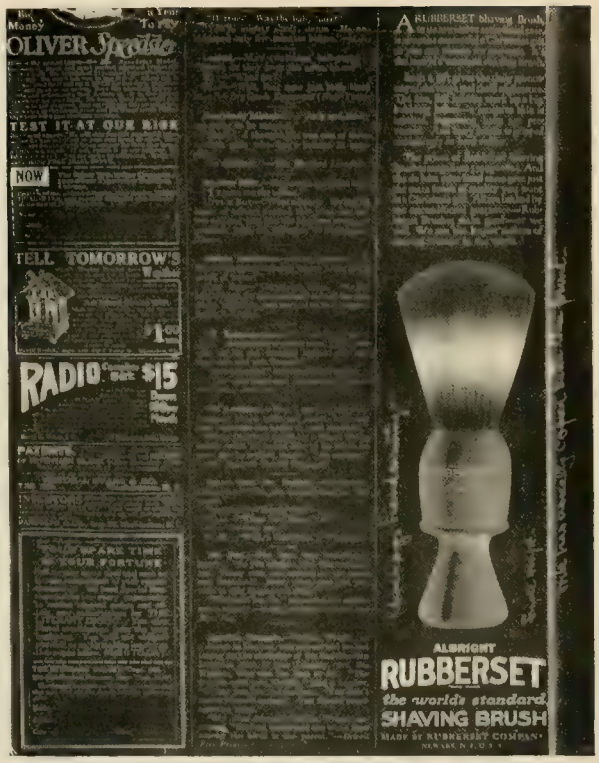


FIGURE 1
REDUCTION DIRECTLY ON BROMIDE PAPER BY MEANS OF MIRROR, SCALE ONE-THIRD
Note size of writing around brush

buckle and cast shadows and the shadowed area is illegible. (see Fig. 2.) If you do put them under glass the result is spoiled by surface reflections. These are a few of the difficulties, the existence of which has probably prevented a general use of what I am advocating. They are not insuperable and an orderly technique can give perfect copies simply and quickly. Let us see what the requirements are:

1—Focus must be accurate—this means a fixed focus.

2—The axis of the lens must be at right angles and central to the thing copied.

3—The lighting must be quite even.

4—The surface of the documents copied must be quite flat.

Focusing

If focusing is to be performed every time the camera is used the method will not survive a dozen attempts. It is too troublesome and difficult. The focus must be fixed for the usual scale of reductions. Take some printed matter equal in area to the largest surface you are likely to copy. Focus it sharply on the ground glass. Let there be a narrow margin around the image and remember that the total reduction must not exceed one fourth if the copy is to be read with the unaided eye and not exceed one eighth, if read with a hand glass. It is advisable

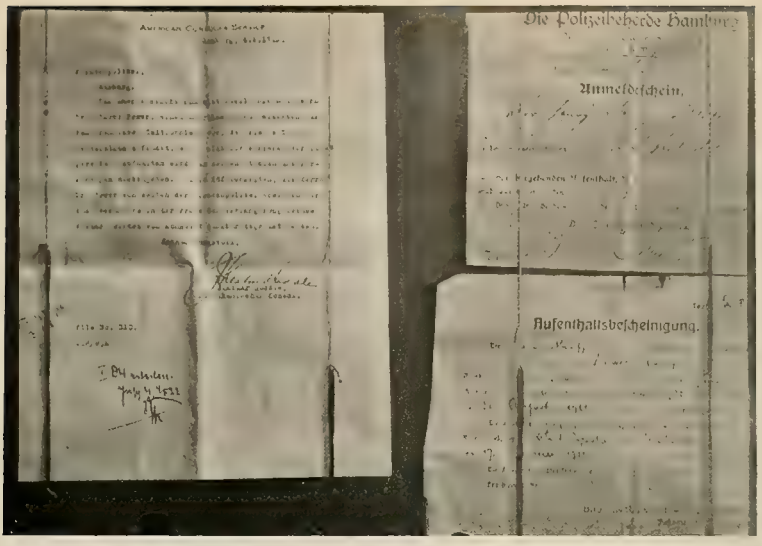
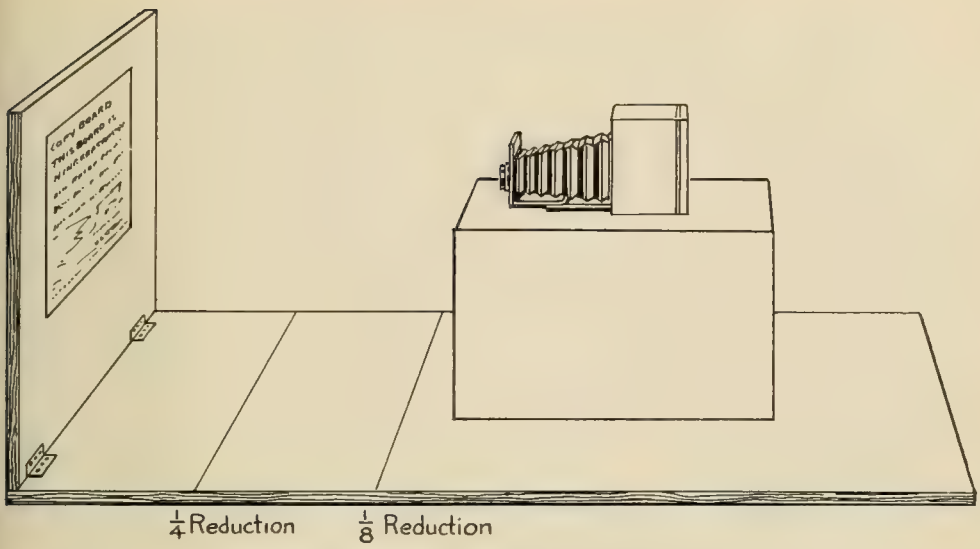


FIGURE 2.—WHAT HAPPENS WHEN THE PICTURE IS NOT FLAT

to make an observation for both these reductions. Now mark the camera extension on the baseboard, and measure the distance from the center of the lens to the center of the subject matter, cut a piece of string the exact length thereof, or mark a tape measure and whenever a copy is to be made it is only necessary to extend the camera to the mark on the baseboard and place it so that the string again extends from center of lens to center of subject matter. Place on the negative and accurate focusing will be automatically accomplished. It is well to test out two such foci, one for one fourth and one for one eighth reduction. Never trust to optical tables for such information. They are based on constants theoretically correct, but not fulfilled in practice. In all copying it is imperative that the plane of the lens surface and that of the surface copied be absolutely parallel. If the camera has not a spirit level it should be provided. Briefly all parts of the camera front must be equally distant from the surface to be copied. Any variation causes marked distortion. Where work of this kind is done at home the simplest plan is to hinge a drawing board at right angles to a baseboard, the latter carries a raised platform to rest the camera at a point opposite the center of the drawing board and transversally ruled with plainly marked lines at the focusing distance between subject and camera. With such an arrangement there is nothing to do, but place centrally on the drawing board the matter to be copied, place the camera at the mark on the platform, extend the bellows to the mark on baseboard and make the exposure. The work of half a minute.

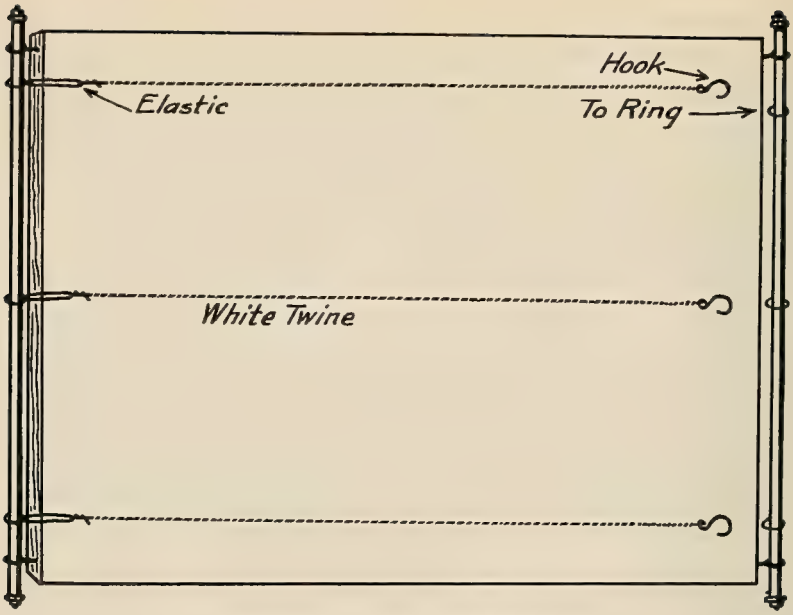


SHOWING RELATIVE POSITIONS OF CAMERA AND COPYING BOARD

The Copying Board

While four drawing pins and any flat surface at right angles to the plane of the camera will suffice in an emergency, yet if the procedure I am advocating be constantly used a better method of adjustment will be called for. The method I now employ is simple, efficient and easy of construction.

The hinged drawing board already referred to is covered with dull surface black cloth, velvet would be better, but it is not imperative, black paper is useless. Along both sides of the board is attached in the regular way, a small brass rod with rings as is used for window curtains. To three of these a short elastic band is attached, and to the latter a length of white twine, ending in a hook that is able to connect with the ring on the opposite side of the board. The length of twine must be such that the hook can only engage the ring by stretching the elastic. Furthermore, the rods must be set back a little on the edge of the board so that the elastic is drawn up taut over the edge. With these conditions observed the twine will tightly compress a sheet of paper against the board. As the rings can be run up or down to any desired point, a manuscript or letter can be held at any point on the surface and the compressing twine arranged not to cover the writing. As it is thin and white its presence will hardly show on the copy. Where a letter is to be forwarded after making a photographic copy, pinholes are undesirable, by this means they are avoided. Both sides of a letter may be copied on one negative. I have required a black cloth to be on the board. The reason is this, such a surface will not impress a plate during the period



A CLOSE-UP OF THE COPYING BOARD

of normal exposure. If a letter is to be copied with writing on both sides of the page it is simply placed to the right of the middle of the board—exposed, turned over and placed to the left of the middle and again exposed—both sides will appear clear on the negative. Center of the board should be indicated at top and bottom by a mark.

Exposure

The main difficulty lies in obtaining equality of illumination, differences that are not at all apparent to the eye, show up distressingly on the plate, and in line work of this kind where clean white on black or black on white is desired the latitude in exposure is not nearly so great as in half tone reproduction. Good, even diffused daylight is probably the best, if artificial light is employed it should be two lights, one on either side of the surface, and not too near. If only one light is available it should be above the surface with a piece of mirror glass placed below it so that the angle from the light to the surface and the mirror to the surface is equal. The latter method gives even illumination, and illuminates shadows. When important documents that have been folded are to be copied they should be first dampened and then dried between blotters under pressure, otherwise buckling along the lines of the folds will be very evident. As to the length of exposure time the best results are obtainable with a stopped down lens and the necessarily increased time. The increased depth of focus is an advantage if surface inequalities have not been properly flattened out.

The actual time will depend on the negative surface used. I use two media—A cut process film—This when developed can be held up to the light and read off, the lettering is white on black or it can be printed to give black on white copies. Development should be for contrast, or cheaper and more convenient for storage is to make the exposure direct on glossy contrast bromide paper. This latter method gives an excellent copy, white or black, but the lettering is reversed and can only be read in a mirror. Of course, the lens is arranged so as to take the image through reversing prism or from the surface of a mirror placed in front of the lens at an angle of 45 degrees. The writing will appear right way about. A prism is too expensive. I use a piece of ordinary mirror glass (the glass should be thin) mounted in a metal backing and hinged to the front of my Graflex camera. A strut from the mirror frame engages a pin on the lens board and holds the mirror at the 45 degree angle. Furthermore, this mirror arrangement enables a photographer to employ the camera for detective work. The accompanying picture was taken on the ferry boat with the victims actually watching me, but having no idea that my procedure concerned them.

A uniquely-made photograph of Handwriting Expert Chauncey McGovern, who is installing, in the Hearst building, San Francisco, the most complete apparatus in the world for making photo-micrographic illustrations (pictures made t h r o u g h microscope and camera) for legal and scientific purposes, to the enormous size of 11x14. The cut shows Expert McGovern at work in his laboratory examining forgeries by TRANSMITTED light. The only illumination used to make this picture was from the lamp, which serves in his transmitted light work.

The special advantage of making negatives of questioned writing, alterations, watermarks and other incidents of documents in dispute, by "transmitted light," with novel and convenient methods by which the average photographer with a ground-glass camera can utilize this "transmitted light," will be described for Camera Craft readers in an early issue by Handwriting Expert Chauncey McGovern.

A Home-Made "Hispeed" Enlarger

By D. Peterson

With Illustrations by the Author

Being badly in need of an enlarging outfit last summer, and not seeing my way clear to buy the kind of outfit I wanted, I decided to make one.

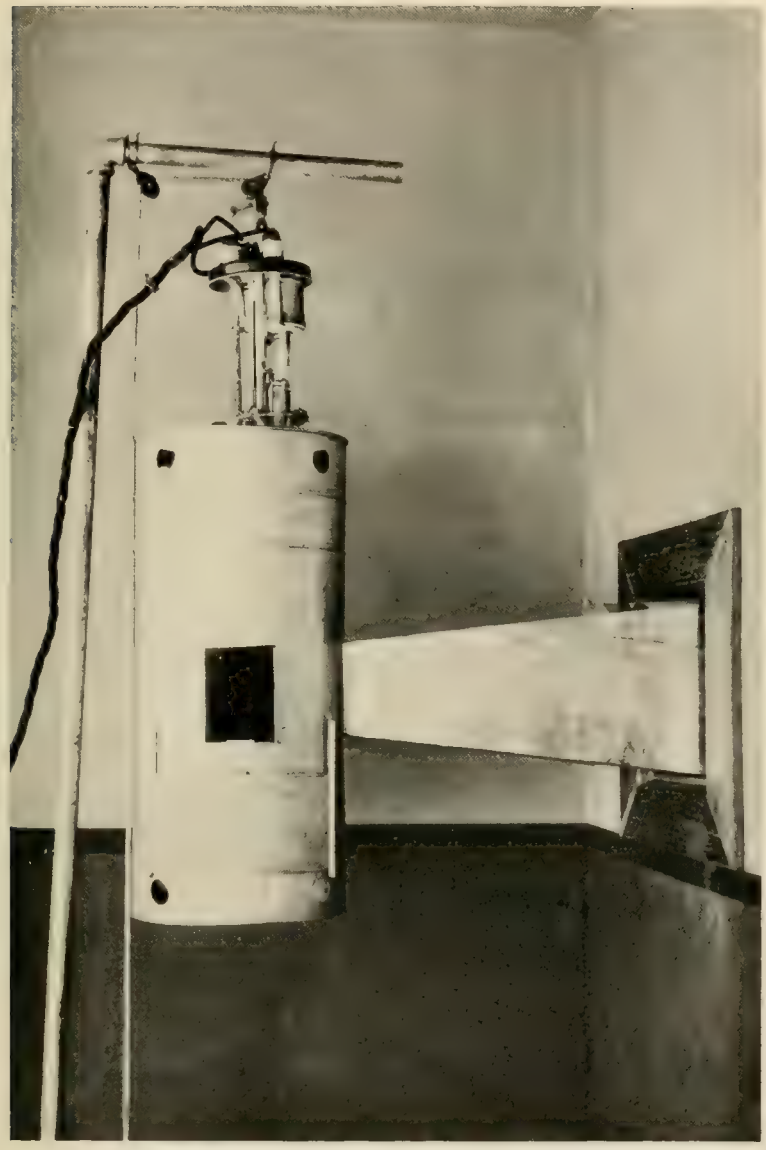
Having a Butler light I figured I could make use of this, but I ran up against quite a problem when it came to getting even illumination without the aid of condensers and as I wanted an outfit to take 8 x 10 plates or films this would have proved very expensive. After experimenting for a couple of weeks, however, I finally got on the right track and the result of my experiment is the outfit shown in the illustration.

The stand marked A in the drawing is an old discarded head screen stand I found out in the shed, B is a piece of gaspipe I picked up at a bargain, C is two 15c pulleys, D is a piece of my wife's clothesline and the balance weight E is an old window sash weight. The stand and gaspipe can be eliminated if you can find a solid place in the ceiling to hook your pulleys, but I couldn't. The drum F is an old print dryer I didn't need, it measures 30 inches in length and is 13 inches in diameter. Two holes were cut in this, one 4 x 5 inches with a piece of tin riveted on each side and at the bottom to hold a piece of ruby glass, as shown in the photograph, and another hole about five inches square where the small end of cone G is connected. This cone is square and made of bright tin and measures 27 inches in length and 5 x 5 in the small end and 12 x 12 in the large end. A 12-inch square hole was made in the dark-room wall.

Not having an 8 x 10 camera to spare for this purpose, I made the box M which is 10 inches deep and 12 inches square on the inside, to this I attached an old 6½ x 8½ view camera O. Right close to the wall is a groove in the box for ground glass L and about 2 inches from this is a space for the negative holder N. If you want to invest in a regular 8 x 10 enlarging camera instead of the above contraption, so much the better.

By arranging the three ground glasses H, K, and L in the relative positions shown in the drawing I found that I got a nice, even illumination and still there is speed enough to make enlargements on such slow papers as Artura, Iris and Vitava Athena, in from 20 to 50 seconds, using an 8 x 10 F:6.3 Anastigmat lens.

The easel T is suspended from a barn door track X in the ceiling. In order to secure the easel solid during exposures, I made the board R with a slit through the middle and nailed this on the edge of a shelf P. To the further side of the easel running parallel with this board, I fastened a flat piece of iron U on the edge, having a bolt and thumbscrew in this iron. Through the slit in the board the easel can be fastened solid in any position by adding the brace W on the back of the easel and extending back a ways to the board R and there fastened with another thumbscrew,

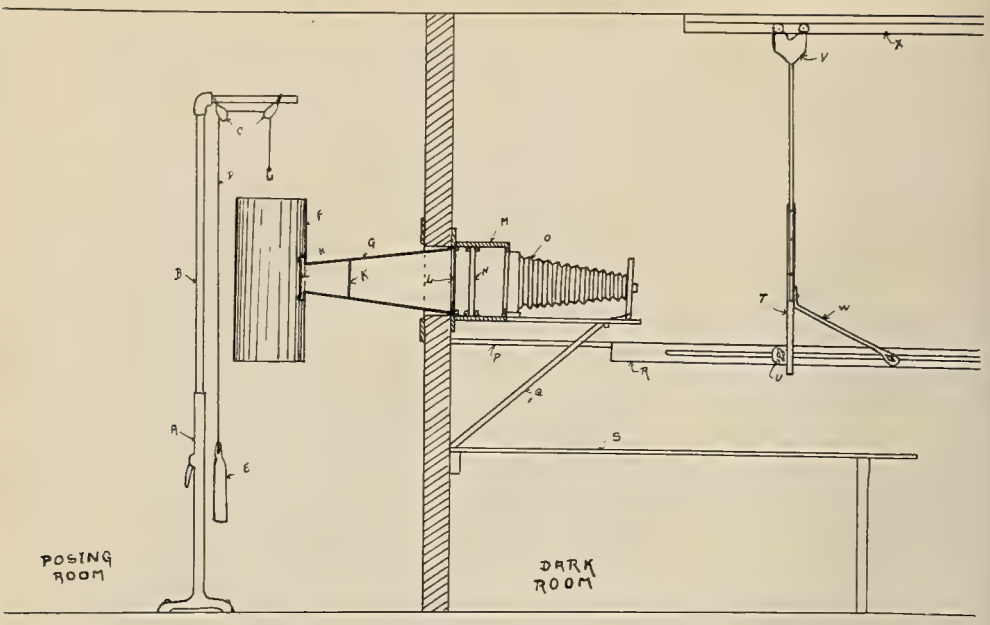


THE WAY THE BUTLER LIGHT WAS USED

the easel can be secured still more solidly. S is the work table and Q is a brace to hold the camera solid.

The box M and the camera O are fastened in place by L shaped screw hooks similar to those used for hanging curtain rods and by giving these a quarter turn the box and camera can be removed in a moment.

The cone G should be made of bright tin and if possible without any seams on the inside. The drum F can be made of galvanized iron and



SIDE VIEW OF THE "HISPEED" ENLARGER

painted with aluminum paint. The opening in the wall is four feet from the floor, but can be made any height to suit yourself.

The easel arrangement, of course, cannot be made the same in every dark-room, but can be made different under different conditions. The arrangement of the light, however, is the main thing and I have found it to work very satisfactory.

Figuring all expense connected with the working of this outfit, outside of the light and my own time, I think the cost does not exceeds $15.00.

REMOVING EMULSION FROM GLASS NEGATIVES

Here's a little trick in stripping the emulsion from exposed or unexposed, developed or undeveloped glass plates, when you wish a piece of clear glass:

Dip the plate in water, any temperature, for about half a minute, remove, wipe dry with a cloth and place the palm of your hand at an angle along edge of plate. Now, draw your hand toward you, which will curl the emulsion off in a tight roll. If the plate has been properly wet, the emulsion will come off in one or two pieces. If the emulsion drys and sticks to the glass, moisten and dry as before. The film should be just damp.

This method eliminates acids, long soaking in hot water and scraping. With a little practice a 5x7 plate can be stripped CLEAN in one minute.—Contributed by R. L. McColm, 202 Fourth Avenue, Asbury Park, N. J.

By Morton and Company, San Francisco.

On Friday, August 3, 1923, at 6 P. M.,
or shortly after, the funeral cortege of President

Warren Gamaliel Harding

left the Palace Hotel at which place he died.
Thousands did homage and gave last honors
in silence to the honored dead.

The presidential rooms were on the eighth floor in the corner of the hotel shown in photograph

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FOUNDED MAY 1900

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The 1924 International
How We Got, Can Get, and Will Get It

None may hope to have anything come to him without some sort of earning. There is a price to what is wanted, always, and the thing most worth the while must be hardest striven for. And it is well that it is so since the enduring depends on the striving that has gone into the making.

Our delegates did not bring back the convention ready made on a silver platter for us to play with; conventions are not distributed anywhere in that way. But after a hard and spectacular fight against an assortment of odds that might have daunted weaker spirits, they did get for us a promise that is in the nature of a great opportunity—an opportunity that is as good as a convention, and may prove better in that it shall give us strength and number, which shall get the convention, too.

Westerners are made of stern stuff and will not be beaten. A promise made with a condition, however heavy the condition, cannot discourage us. We are prodded to action, and find a new zest in the doing. When such promises and conditions are made in good faith we not only are apt to win but to earn the admiration and respect of those who put the tests upon us.

THE CHOICE OF THE CONVENTION WAS LEFT TO THE BOARD OF DIRECTORS TO BE MADE AT THEIR JANUARY MEETING, WITH A RECOMMENDATION THAT SAN FRANCISCO OR CHICAGO BE SELECTED. IT WAS A FIRST CHOICE IN OUR FAVOR, AND THIS WAS REINFORCED BY A MORE OR LESS OFFICIAL ASSURANCE THAT IF WE SUCCEEDED IN GETTING FIVE HUNDRED NEW MEMBERS TO THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA BY THE END OF THE CURRENT YEAR WE SHOULD BE THE ONE CHOICE.

THAT WE CAN AND WILL GET THE REQUIRED NUMBER IS A FOREGONE CONCLUSION, BUT WE DO NOT PROPOSE TO PROMISE ANYTHING TO PROSPECTIVE MEMBERS WHICH WE CANNOT IMMEDIATELY DELIVER OR THE FULFILMENT OF WHICH LIES OUTSIDE OUR OWN POWER. SHOULD SOME MIS-

CHANCE CAUSE A FAILURE IN THE LIQUIDATION OF THE ASSURANCE GIVEN US, WE MUST NOT BE PUT IN THE ATTITUDE OF HAVING PEDDLED FALSE HOPES AND INDUCEMENTS LACKING GENUINENESS.

The Association has so many advantages to offer here and now that none depending on futurity or distant achievements should be needed; notwithstanding which this assurance is made: Every new member who will express a wish to that effect at time of joining shall have his payments deposited with the Anglo-California Trust Company of San Francisco, there to be held in escrow till the Convention of 1924 shall have been given to us, whereupon it shall become a paid for and receipted fee to the Photographers' Association of America. Failing in this, every cent without deduction shall be returned.

There seems no sane point of view other than that California be the right place. It has been our personal experience to find that deep in his heart every easterner holds a hope, an ambition—yes, a determination—to some day come to the Pacific Coast. The extreme heat of summer, the rigors of winter add force each year to this sacred inner thought. A place where the mildest temperature of spring holds as an every-day condition throughout the year, where cool breezes blow from a peaceful sea in July, and roses sell on the streets all the year round at from fifteen cents to twenty-five cents a dozen, where choice fruit is to be had at summer prices in midwinter, and where the people of the world foregather because they wish so to do and not because the exigencies of business compel them—such a place assures a large attendance.

WHATEVER THE SUCCESS OR LACK OF SUCCESS OF PAST CONVENTIONS, WE ARE BOLD ENOUGH TO SAY THAT A CONVENTION HELD IN SAN FRANCISCO HAS EVERY ASSURANCE OF BEING A RECORD-BREAKER. ITS SUCCESS IS FOREORDAINED.

The choice of the Directors would redound with honor on their courage and perspicacity.

Western hospitality is not an empty phrase. It has endured through generations and has survived selfish calumny. San Francisco has ever lived up to its reputation for doing big things in the biggest way, and what man may not offer God has lain upon the far west with a lavish hand. The blue bow of cloudless heaven curves from the wonderful picturesqueness of the Sierras to the horizon bulging over the placid waves of the Pacific. All outdoors hem in even the metropolis. The ocean, the mountains, the gigantic redwoods, are near us, and we feel our hearts are bigger, too, for the environments. We ache to share our blessings with our brothers.

ALSO WE ENJOY PROVING HOW ABLE WE ARE TO PUT OVER LARGE SUCCESSES.—S. B.

For the Professional

In the Interest of Commercial and Portrait Photographers

MEETING OF THE PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA

Held at Hotel Stewart, San Francisco, on Monday Night, August 13th, 1923

Forty-eight members and friends having concluded an enjoyable dinner, Fred A. Webster, president, said: I hope you have all had a good dinner and a good vacation this summer. You are all looking happy, and I am glad to see you tonight again. The Commercial Photographers' Association is also represented here tonight, and I want them to feel welcome with us and to take part in our deliberations. We will call the roll tonight, but in a somewhat different manner from usual. Each will call the name and classification of the friend on his right. I will set the example by announcing Mr. Anderson of Camera Craft.

The roll was called in this manner, which led to several displays of kindly humor.

Mr. Ralph Young, noting the absence of Mr. Felloes, said: Mr. Felloes has been sick for some time. He has done so much for this Association that we very much regret his illness, and I think we should all send him a helpful thought.

Mr. Webster asked Mr. Anderson to take the place on this occasion of Mr. Felloes and read the minutes of the last meeting.

Mr. Anderson read the minutes of the last meeting, which were approved as read.

The chairman referred to Mr. O. J. Smith's demonstration of "Artificial Lighting," which took place at the last meeting, and to the display of the beautiful negatives then taken. This technical demonstration of Mr. Smith's is what I hope will be the beginning of a series of demonstrations, and I would like you to think that over and express yourselves. We have had lectures on business and advertising, and I think we might now take a step from the profitable to the technical end of our profession, spending a part of each evening in that way. I will now call upon Mr. Morton, one of our delegates to the Convention, for his report.

Mr. Morton: Mr. Chairman, Ladies and Gentlemen: Some of your other delegates are more capable speakers than I am, but as I have been working on the political side of the Convention, I will tell you something of what has been done in that way. When we started out we discovered that the Chicago Association had made up their minds to have the next Convention held there, and there was a great line-up of the boys with that end in view. Well, we went right on to Washington and right on to our work; but the first day or two they did not pay much attention to us. As time went on and we had our various stunts, including our California Night, they took us more seriously—so much so that I believe we will have the Convention here next year.

The commercial and portrait exhibits of the P. A. of C., being on uniform mounts, were a big item in helping put California over and kept our name and our purpose constantly before the delegates.

We started out on Monday morning with a donation of a cup to the commercial section for the best individual exhibit. It was called the "California Cup," and was awarded to Kaufmann & Fabry Company of Chicago. The cup for the best association exhibit was won by the Photographers' Association of Chicago. In both cases the award was fair, for they had very wonderful pictures. This exhibit will be shown here at a later date. It was a much larger exhibit than we had last year, very representative and worthy of close study.

Then we had a distribution of poppies at the reception and dance in the evening.

Wednesday night was California Night,

CALIFORNIA NIGHT AT THE CONVENTION

and was a tremendous success. It was a terribly hot night. The first thing we did was to invite all the gentlemen to take off their coats; the room was really suffocating. Mr. Main of the San Francisco Convention and Tourist League was responsible for the success of that evening. He had been in Washington for three or four days, and had laid plans for that evening and made arrangements for the projection of motion pictures, and had attended to a hundred and one other things. There were no dull moments. The song "I Love You, California" was beautifully sung by Mrs. Bowie, a well-known singer in Washington, for which she was encored several times; and this put the audience in a receptive mood for our other numbers.

Mr. Diehl, President, welcomed our guests on behalf of the Photographers' Association of America, and very graciously complimented California on its progressive spirit and its desire to entertain the P. A. of A. in 1924.

Mr. Yew Char, who passed through here on his way to the convention, was on hand with his bride. He had a place on the program of California Night, and showed slides of Honolulu. He gave a very humorous talk and extended an invitation to the P. A. of A. to come to Honolulu, but suggested if they could not come to Honolulu he would like to see them come to San Francisco.

The drawing of the prizes was reserved to the last, and in spite of the heat the audience stayed until the last prize was drawn. The grand prize was the last drawn and consisted of a room and bath for two persons at the Palace Hotel for the week of the 1924 convention at San Francisco. This was won by Mrs. Leila D. McKee of Pittsburgh, Pa.

The evening terminated with the distri-

bution of the raisins donated by the Sun Maid Raisin Growers' Association and oranges donated by the Los Angeles Chamber of Commerce. The Los Angeles Chamber of Commerce also furnished us with leaflets endorsing San Francisco as the next convention city.

Harry Coleman, who was on the Examiner here, has charge of the art department of the two Hearst papers in Washington, and had his photographer make a photograph of the California delegation, which was published in the Washington Herald the following morning, together with a long article describing our activities on California night. On Thursday we had copies of this paper distributed on the lunch tables. Some little thing or another each day kept us before the people all the time, and they began to realize that we were real people out here.

Another thing that made a big hit was the distribution of telegrams. There were six telegrams sent, one each from Mayor Rolph, San Francisco Convention and Tourist League, the San Francisco Ad Club, the Downtown Association, the Chamber of Commerce, and the Rotary Club, inviting the P. A. of A. to San Francisco in 1924.

The Western Union Telegraph Company were kind enough to give us 500 multigraphed copies of these telegrams, which were distributed through the entire building by messenger boys. These boys handed each person a complete set of the telegrams.

On Saturday morning the Board of Directors met, and I went before them and laid all our claims on the table. The Board of Directors pointed out that there were only eight registered and paid-up members in the National from California. However, they said they liked our spirit, and if we could show a membership of five hundred in the National by January, there was every reason to believe we could get the Convention.

In the meantime I gathered some data on the photographic population on the Coast—fifteen hundred in California—so I do not think we shall have any difficulty in getting the five hundred members that they require. Then, again, we were reminded that we have no charter; we are not affiliated in any way with the National. That was another thing that made our plea all the more difficult to gain consideration. So one of the first things will be to see the secretary about obtaining a charter.

Now, as to plans for getting the five hundred members. It is essential to collect their dues in advance. We cannot go to the Association without actually having their membership dues. Neither can we go to the photographers unless we have the actual convention. My plan is to put the money in trust, which is practical, and I have made arrangements with the Anglo-California Trust Company to handle the money. The membership dues will be collected and placed with this Trust Company in escrow. If we do not get the full five hundred members, the money will be returned to the individuals. If we do secure the five hundred members and the convention, the money will automatically go to the treasurer of the P. A. of A., and the members will have the full privileges of the 1924 convention and a paid-up membership for one year.

I know that many of us will take advantage of the opportunity and enroll our employees, so I believe that right here in San Francisco we shall get from two hundred to two hundred and fifty members. We have four months to get the membership. The Board of Directors of the National will meet in January, and by that time I hope we shall have the membership and have the money in the bank.

I want to say that Colonel Merrill and Mr. Main of the San Francisco Convention and Tourist League were on the job all the time everywhere looking after the details, and I want to propose a vote of thanks to them and to all the people who helped us both here and in Washington. The Board of Directors of the P. A. of A. were very courteous and made California Night possible. Mr. Campbell, the secretary of the P. A. of A., did splendid service for us. The support of Los Angeles through their delegate, Mr. Putnam, indicated that all California was with us, and that helped a great deal, because it showed the state was unanimous.

SHOWING TWO OF THE SIX DIFFERENT VIEWS USED BY OUR DELEGATES ON THE BACKS OF THEIR BUSINESS CARDS

I believe the Western Union Telegraph Company should have a vote of thanks for their co-operation.

Miss Katheryn Gunnell was the delegate from the Pacific Northwest. She came from Salem, Oregon, with instructions from her association to co-operate with us in every way, which she did. I ask a vote of thanks for her and them; also the commercial photographers who donated the enlargements for decorating the hall on California Night.

Many others were mentioned, but for lack of space we are unable to publish the entire list.

This motion was seconded and carried unanimously, and the chairman instructed the acting secretary to write a letter to each of the names included in the resolution.

Chairman: I will now ask Mr. Main if he has something to say to us.

Mr. Main: Mr. President, Ladies and Gentlemen: This is the end of a perfect day for me, a full one, and I felt that, for a part of the day, it would be a fine thing for me if I might be a photographer and have a dark room and take a snooze for a little while. We had a delegation to work with that did not seek any credit for the work they were doing. It makes it so much more easy and powerful when we have a local organization that we can work with. Forty-one years have passed without there being any recognition of the great State of California by your National Association. You can have no idea of the obstacles with which we had to contend. These fellows you sent to Washington were working all the time, and what they did Mr. Morton has covered very thoroughly. On Monday morning when I went among the manufacturers I found it was a big jump so far as San Francisco and getting the Convention there was concerned. But, as the days went on, and we pulled stunt after stunt, they realized that the Californians were an active and determined lot. There was something doing all the time, and your delegates never quit. Imagine a photographer not knowing anything about California. You wonder how in the world they could get along without us. There are ten million people west of the Rocky Mountains.

When you consider that all the time I was in Washington I did not have a breath of air except from an electric fan, you can imagine how awfully hot it was. But on California Night we held the audience the entire evening; and it was a wonderful thing to do—to hold the delegates that long, especially after being in session all day in that heat. It simply shows what organization will do. You can never get any recognition except through organization, and your delegates showed that in full measure. I thank you. (Applause.)

Chairman: Mr. Lancaster, one of our honored and active delegates, is back, and I expect full of good things to tell us tonight.

Mr. Lancaster: Mr. President and Friends: I would like very much to be able to give you a complete report starting at Martinez, but instead of that we will have to start in Washington. On reaching the hotel the first man I met was Mr. Morton. He seemed to be glad to see us and we were tickled to death

to see him. I can't tell you what he had not done—I recognized that we had a super-man among us. Speaking of working together more or less, "it is not the individual, nor the army as a whole, it is the everlasting team work of every blooming soul" that gets you there. I want to tell you something about the demonstrations. The demonstrations are all made with artificial light, that is, electric light. They were unique; but the thing that hinges on it and the lesson is not the work that they produced nor the methods, but the fact that each man was selling his own individual self to his customers. Mr. Mock of Rochester, "Photographer of Men," just men, is a great big man, and every one of his pictures is his own individual work.

A young lady there gave a very pretty demonstration of photographing children. Very pretty she was, a delicate lady herself and very artistic. She had three or four very pretty little subjects to photograph. She held their attention sometimes with a celluloid ball that she carried in a little pocket for this purpose; she tossed it over to the kid, and when the kid smiled it was all over. She also used a mirror. But she did not use any broad lights, the faces were all full of shadows, but soft shadows, and the drapery was very prettily illuminated.

Mr. Nickolas Muray of New York City made some wonderful poses; he had some wonderfully draped ladies. You could hardly expect me to give a complete talk on these demonstrations in just a few minutes, because most of them occupied from twenty minutes to three-quarters of an hour. I have just sketched over them for you, that you may, perhaps, get some idea of what they were like.

But there is one thing that I want to tell you about, and that is the exhibits of photography that we saw there. They were marvellous, really marvellous. The Eastman Company has one of the most wonderful displays of photography that I have ever had the pleasure of looking at—great albums full from all over the country, but very few from California, and in that I was disappointed. They lay particular stress on the Eastern work, and some of it was unusually fine. I heard a good many comments on it and I heard a good many of the best critics.

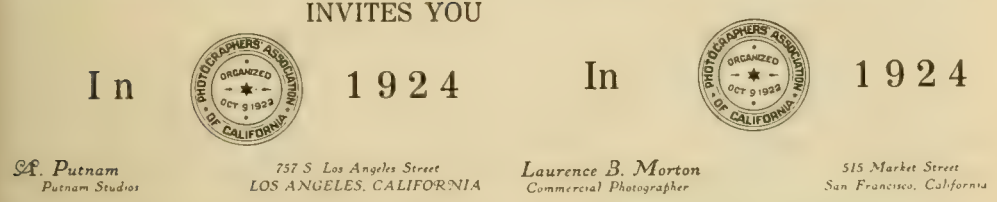
The California exhibits were a wonder to everybody, because so unexpected to them; they did not think we had any photography on the Coast.

Chairman: We have been anxious, I can assure you, to hear from you the knowledge you have obtained on the high lights and trend of thought shown at the Convention, from such diversified parts of the country, so I have asked Mr. Anderson if he would give us some of his impressions.

Mr. Anderson: Mr. President and Friends: Mr. Webster asked me to talk a little on how the display of the manufacturers' goods appealed to photographers, and also to the dealers; also on the benefits to be derived in going to a convention. The Convention Hall, where the manufacturers held their exhibit, is a large place with lots of room to display goods as they should be shown. The list of exhibitors contained 57 names. To the right of the main entrance the Eastman Kodak Company had a large exhibit; the Ansco Company was on the other side; then the Defender Company, Wollensak Optical Co., Pako Co., and others filling the center and the side booths. I know you will be interested in what is really new that was shown there.

The first was a display of several new additions to artificial light equipment. I may state here that artificial light seems to be growing in popularity in the studios. There was a new method for quick drying of ferrotyped glossy prints. There were several types of automatic focusing and enlarging machines, one of which not only enlarged but also reduced, copied, and printed borders on your prints by projection. There was an automatic printer and developer which was very good. One firm had a machine for fixing prints which worked on the same principle as the rotary drum washer. It was especially suitable for fixing prints that were small and on single weight paper, which are sometimes found difficult to fix in an ordinary tray and usually get insufficient fixing.

Then, for commercial men, they had a process demonstrated by the National En-



SHOWING TWO OF THE TEN DIFFERENT SLOGANS USED BY OUR DELEGATES ON THEIR BUSINESS CARDS

gineering and Refining Company for throwing down the silver in old hypo baths. There is money in it for you. The cost of saving the silver is small.

For professional portrait photographers I did not see anything really new in the line of your work, except, as I said before, in artificial lighting effects and the equipment used.

There is one point I want to bring out. It is in regard to the Convention being an exceedingly fine place for photographers to get together, especially from the point of view of seeing what the manufacturers have in their different lines, and also from the point of view of the manufacturers themselves. You can compare the different lines they are putting out and make an intelligent selection. You can also get first-hand information from their representative there who knows most about those particular goods. Attendance at a Convention would be a very valuable experience for every photographer, and that is why I am anxious to see that Convention come out to California. I do not know that I can tell you anything further about the manufacturers' exhibit, so I will talk a little about the exhibit of the pictures.

I regret that I did not see the commercial exhibit the way I wanted to. I understand Mr. Putnam looked that over, and he will be able to tell you what is what. The portrait photographers' exhibit was fine, but it was easily seen that the work had been hung in a hurry, so that the general effect clashed somewhat and did not show the pictures off to the best advantage. Notwithstanding that, there was much to be learned from this show of really good pictures.

In the demonstrations of lighting effects they all used spot lights. Miss Stewart, in her demonstration, did not use a white background, but a very pale green. I saw some of the prints and found that the background registered very well indeed. Her main source of light was farthest away from her subject and the spotlight close up, which gave quite a vibrant light in the pictures. She says she got the idea of light from studying natural sunshine on the trees, etc. If you examine the same study under a dull lighting and overcast sky effect, you will see that the lighting makes all the difference in the world.

Mr. Mock gave an interesting demonstration on his photographing of men. He used a main light and two spot lights. The spot lights were placed one on either side of the subject and focused in such a way that the lighting effect obtained was duplicated when he reversed the subject. He handled the lights in a very easy, simple manner, claiming that if the handling of the lights was made a difficult job we were using the wrong technique and should commence again.

Mr. Beach gave a very fine talk on art and photography. Art is as old as the hills, yet it is curious to note how little attention has been given to it by photographers. Mr. Beach brought out his point by showing that there should be one dominating keynote, and illustrated this fact by photographs he had selected from the exhibit.

I would like to say something about Walter Scott Shinn and his "Psychology of Child Photography." He claimed that he had several hundred toys in his studio for interesting a child, and succeeded in this by imitating the sounds and actions of the various animal figures of the toys and making conversation between the animals and the children. His general talk was on gaining the confidence of the child, and that is why Walter Scott Shinn is so successful in his own particular line. His motto is: "He who serves best profits most." His principle is that a customer must be satisfied, and to attain that he does not care how much the work costs him, because a satisfied customer is the very best advertisement. He did not give any actual photographic demonstration, explaining only how he handled the children.

Nickolas Muray put on a very fine demonstration, which was quite different from all the others. You who see his work shown in the magazines, in "Shadowland," should watch his lighting effects. His reception room is on the lower floor and his operating room is in the attic, the ceiling of which is about nine feet high. His main source of light is from four 1000-watt lamps. The lights are about eight feet from the floor and attached to the ceiling. He has a platform on which he poses his subject. He says that putting the subjects a little higher gives them a feeling of looking down, and that this gives a better expression and a better effect. He generally uses one spot light. The next time you see a Nickolas Muray picture, notice it carefully and you will understand how the pictures are made. Nickolas Muray is one fine fellow, and Camera Craft hopes to publish an article by him along the lines of the demonstration which he gave in Washington. All of the demonstrations were very fine, and you will get them in Camera Craft at different times throughout the year.

The general trend in the commercial line is to use longer focus lenses than ever before.

Harry Devine was asked, during his demonstration what he would do if asked to photograph, say, an interior that demanded the use of a wide angle lens to get it all onto one plate. He claimed that he would use a lens of moderate focal length and make a series of exposures and join all together. This eliminates distortion and foreshortening, and gives a more pleasing presentation of the subject.

Mr. Bartz gave a talk on industrial photography. His main idea is to get action into his pictures. He showed pictures with and without action, and it was easy to see the action pictures told their story better.

Mr. Ryder gave a very fine talk on "Photography in Law Cases," telling how the lawyers will trip you when you are describing how the pictures were taken, advising the use of the word "approximately" whenever describing distances and angles pictures were made from. He also emphasized the fact that all negatives must be absolutely untouched; you must not even spot them or the prints.

I have nothing further to say, except that Mr. Morton had everything ready and had everything planned. If I may be permitted to give you certain names for honorable mention, they will be those of Colonel Merrill, Mr. Main, and Lawrence B. Morton, who have achieved so much at the Convention. (Applause.)

Chairman: Mr. Anderson will, at some future time, give us a criticism of the pictures which he saw in the East. I hope it is the will of this meeting that the committee continue their work for the convention and may formulate their plans for doing so. Mr. Morton has outlined those plans, and it will be left to the committee to execute their plans as far as they are able to do so.

Mr. Seron: I move that a vote of thanks be tendered to the delegates. Seconded and carried unanimously.

Mr. Moulin said he had received a letter from the president of the Commercial Photographers' Association containing the Blue Ribbon awarded to R. J. Waters for his pictures hung at the Convention in Washington, and took this opportunity to decorate so worthy a photographer, at the same time moving that Mr. R. J. Waters be received as an honorary member of the Commercial Photographers' Association—its first honorary member. (Applause.) The

motion was duly seconded and carried unanimously.

Mr. Waters: Mr. President and Fellow-Photographers: It is a surprise to me that any picture I sent on should call for any medal; but, for the benefit of the Association, I am glad that we have let them know that we are doing something out here. I am very pleased and thankful to you for making me an honorary member on my retiring from business, for I must say that I really regretted severing my relations with the Association. I thank you very much indeed for the appreciation you have shown to me in this matter.

The remainder of the evening was very enjoyably occupied by other speakers, among whom were Mr. MacLane, Mr. Ralph Young and Mr. Seron.

Miss Reed announced that two photographers from Nevada desired to join the Association, and moved that Nevada be included in the territory of this Association. On being duly seconded, the motion was carried unanimously.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

Which Camera Shall I Choose?

In nearly every batch of mail that arrives at the office there is an inquiry such as this: "I intend to do so and so in the photographic line; what kind of camera shall I get?"

There is no one camera that will do everything and do it equally well. If we have the wherewithal, we can select several cameras that will enable us to cover most everything in the amateur photographic line. The average amateur or beginner in photography doesn't have the necessary experience to choose a camera for himself. He usually goes to a store, has the salesman behind the case in the photographic department show him a few models, and selects the one that appeals to him. It may be a box camera or a folding camera that takes either roll film or film packs, but very rarely will it be a camera that has a ground glass back for focusing. Whatever the model happens to be, you should learn to use it right. Find out just what you can do with it and then go ahead and do it. Every camera model has its limit as to what it will do and what it won't do, but within these limits it is as good as any other.

The great majority of camera users belong to what is known as the snapshot class—they are quite content to press the button and let the other fellow do the rest. They are happy, and they do get great enjoyment from their snapshots. Many of their prints become priceless to them in later years. From among the ranks of snapshooters are recruited our future leaders in the photographic world. They are anxious to get ahead and we of Camera Craft are only too willing to try and help.

Now, we will say that we are going to specialize on landscape photography, and we intend to use one or more lenses with our outfit. What camera shall we buy that will enable us to do it? Now the question is simplified. We can get a camera with ground glass focusing panel; it might be of the view type or it might be the reflecting, such as a Graflex. Under the view type we find several models that are suitable, have good size lens boards to accommodate our various lenses, and they come in 3¼x4¼ and 4x5 sizes. We usually take along a tripod with us, because some of our subjects require that we use a color filter to get correct separation. This increases our exposure, as we very often have to give, even with the Graflex, an exposure of 1-5th of a second. We will now figure out which of the two types will suit our purpose best. From the point of convenience and easiness to use, the Gra-

flex or reflecting camera has a slight advantage over the view camera. The R. B. Auto Graflex camera, and the reflecting cameras in general, have a rising and falling front. It is true they haven't as a rule a swinging front, but that isn't essential in the sizes we use, namely, 3¼x4¼ and 4x5. In the larger sizes it would undoubtedly be of advantage at times, but very few amateurs use the larger machines now. Those that do have their own reasons. You might say that we make our exposures from too low a view point with the reflecting camera. If we do, it is our own fault. If we have our tripod with us, we can set the camera on it and make our exposure, but we should have either a direct finder or a wire finder attached to our camera for the very reason that sometimes it is necessary to have the camera at eye-level to get just what we want. Again, to get what we want, the proper view point might be very close to the ground. However, this is a point we have to determine ourselves when studying our subject. Again, you might say we can't use a very short focus lens with a reflecting camera. I admit you can't, but how many landscape subjects require the use of a lens of this type? Very few. To be candid, even when using long-focus lenses, we often enlarge the center part of our negative only. That brings up the point what is the ideal focal length of a lens to use? Personally, I favor a lens that has a focal length equal to one side plus one end of the plate or film we are using. For example, we will say we are using a 4x5 camera, 4 inches plus 5 inches equals 9 inches. The length of the diagonal of the plate would be a good second choice.

Now for the Lens Itself

If one can afford it, a combination of two lenses would be very good. One of them to be a soft or diffused focus lens and the other a good grade anastigmat, say of the convertible type. This would give you the choice of one or two different focal lengths of lenses, depending on the type of convertible you buy. We will say that you are unable to buy a lens of this nature. Don't let that fact worry you. You still can get an R. R. lens; it is a trifle slower in speed, but it is convertible, and what is more, you can do good work with it.

Portraiture

Now for portraiture. I must say that I prefer the Graflex above all others. If you are photographing children, they are ideal. For grown-ups they are also good. Seeing the picture the right way up is an advantage. With the view camera, you can arrange a mirror attachment to the ground glass, and by looking down from above see your figure right side up. If you should happen to be using a view camera for portraiture, I would recommend that you try the mirror and see how you like it. Hold the mirror against the bottom edge of the ground glass and tip it at an angle of 35 to 40 degrees, and see how you like it. If it appeals to you, make it permanent. For marine work, especially where the objects or we ourselves are moving, the reflecting camera would still be acceptable, although a camera of the focusing type would be good. We could still press our view camera into service, but some type of a finder would be necessary to center our subject.

For architectural work I believe we will have to rate the view camera first. Its greater range of front and back movement makes it first choice. Nevertheless, even here the reflecting camera is good, especially if you are striving after pictorial effects and not photographing the interior or exterior as a whole. For pictorial effects a part is generally better than the whole, for the very reason that it simplifies things and centers interest.

All things considered, if I were limited to one camera, my first choice would be the R. B. Auto Graflex in either the 3¼ x 4¼ or 4 x 5 size, (I own a 4 x 5 myself.) Lens equipment, one of the standard diffused focus lenses and a good grade convertible anastigmat. My second choice would be a 3¼x4¼ or 4x5 view camera with lens board large enough to take our various lenses, same as for the Graflex, which would give us a choice of lenses of different focal lengths. This would at times be very advantageous. If we can't afford the price of the higher grade con-

vertible lens, we can, as I said before, use an R. R. lens. With the Graflex camera we have our focal plane shutter for making the exposure. With the view camera we will have to figure on a shutter. Nearly all the lenses are listed with shutters; in fact, one generally has the choice of several. But there is another type of shutter that is very efficient. It is the roller blind shutter. We have the choice of two: one is the Thornton Pickard and the other is the Barré Roller Blind Shutter. Both are good. Some might object to the above outfits because they are a trifle bulky, but what is a pound or two in weight if we get the results?

It isn't always convenient to take along our larger camera, and the possession of a good small camera that goes in the pocket is something that is worth having.

Now that we have decided about the camera, we would like and maybe can't obtain at the present; don't let that fact stop you from making pictures that are worth while. Just keep plugging away, remembering that all of the best work is not done with the higher grade machines. I know of some of our best workers who use outfits that are nothing to brag about, yet they get results. Why, you may ask? Well, I will tell you. Their camera is only a means toward the end, the pictures they make are bits of themselves, they know what they want and they strive until they get it. It is the man behind the camera that counts most of all.—P. D. A.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Modified Copper Toning

Some variations in the customary Ferguson process of copper toning are recommended by Professor R. Namias, of Milan, an experimenter whose modifications of various existing methods reach quite a respectable total. The prints are first toned in the usual bath of copper sulphate, potass ferrocyanide and soda citrate, but Namias lays especial stress on the purity of the last-named. The citrate should not be alkaline, as some samples are, and, on the other hand, if too acid, causes the toning bath to become muddy sooner than it should. One variation, or rather extension, of the process is to transfer in full day light the fully toned and washed prints to a metol-hydroquinone developer containing 2 gms. of bromide per litre. The silver ferrocyanide in the toned image is thereby reduced to silver, agreeably modifying the tone. Lightly developed prints should be used, as the process intensifies. A second variation is to treat the copper-toned print with a 1 per cent. solution of caustic potash or soda, the effect of which is stated to be the formation of a violet-colored oxide of copper in the image. The print is then placed, in full daylight, into a developer, by which again the silver ferrocyanide is reduced, the resulting print being of pleasing brown color. If the copper toning be carried out partially in the first instance, the resulting tone is a warm black. Unlike the modification already mentioned, the process has not an intensifying effect.

—B. J. of Photography.

The Small Reflex

We are glad to endorse the recommendation of Mr. A. C. Banfield, made at a meeting of the R.P.S. Pictorial Group, of the 3½ x 2½ reflex camera as the choice of instrument for the serious tourist photographer. Mr. Banfield uses a Soho reflex of this size, finds it light and reliable, and is able to employ focal length of lenses from 4¾ to 12 inches, the former a Ross Xpres and the latter a Dallmeyer Dallon. We agree that the 60 x 45 m.m. size is on the whole too small. Mr. Banfield refers to the difficulty of ensuring the flawless negatives which are necessary in this size,

unless the photographer is exceptionally gifted as a retoucher. To this objection may be added the further one that selective focussing becomes impossible with most subjects when employing a lens covering a normal angle of view. Adopting the reflex in the size of 3½ x 2½ inches, the photographer is not inconvenienced by the bulk of the apparatus and as regards weight, by carrying 24 cut films in a changing box and a further dozen in dark slides, Mr. Banfield's whole load, including three lenses, did not exceed 10½ lbs.—more than some people care to carry in these unpedestrian days; but then the outfit has a wide optical range and provides for 36 exposures in the course of the day, whilst the negatives are usable for contact souvenir prints and are as suitable as can be desired for lantern slides.

—B. J. of Photography

Hydrocoerulignon Developer

In the Festnummer of "Photographische Korrespondenz" Dr. B. Homolka has an interesting note on a developing agent which he has discovered with properties analogous to those of indoxyl. The latter has the property of developing the latent image and of attaching to the silver image one of indigo, formed by oxidation of the indoxyl. In the present case the oxidation product, coerulignon, is of orange yellow color, so that the compound image consisting of it and silver is brown in color. The developing solution is made up by dissolving 5 gms. of potass carbonate and 10 gms. of soda sulphite with 1 gm. of hydrocoerulignon in 100 c.c.s. of water. The image appears in about half a minute, and development of either a plate or bromide paper is complete in 4 to 5 minutes. By treating the resulting compound image with an alkaline solution of sodium hydrosulphite, the colored element is reduced and dissolved, leaving the ordinary image of black metallic silver. On the other hand, the use of the Farmer's "reducer" oxidizes and dissolves the silver in the image, leaving one of the orange-yellow coerulignon. The results have an interest in their bearing on the theory of developers, but Dr. Homolka does not suggest that the developer is of practical usefulness, although its properties are more attractive in this respect than the blue-image indoxyl.

—B. J. of Photography.

Reproducing Stained Films

It very often happens that a photographer is called upon to make a print or enlargement from an amateur-developed roll-film negative in which large yellow patches have appeared as a result of uneven fixation. This defect is usually due to the "pull through" system of development and fixing, when the film is usually put to wash immediately the unaltered bromide has disappeared. As no isochromatic bromide papers are on the market, it is necessary to reproduce such negatives. By using an isochromatic plate and yellow light a clean transparency may be easily obtained. If this is to be of the same size as the original, the exposure may be made through an ordinary yellow glass, or even by the yellow light used for developing bromide prints, but for enlargements or reductions a yellow filter, as used for outdoor work or copying, becomes necessary. It is sometimes possible to remove such stains by means of the cyanide and iodine reducer, but if this be not possible, or if the negative is of great value, the reproduction method should be adopted.—B. J. of Photography.

GLUING LEATHER ON CAMERAS

When gluing the rather stiff leather on cameras, if the leather is thoroughly soaked with water, by painting it on with a brush, it will lose its stiffness and can then be glued snugger to the case. Wet leather shrinks in drying and hence makes a nicer job.—Contributed by R. L. McColm, Asbury Park, N. J.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St. Berkeley, Calif.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Stereoscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

ALBUM DIRECTORS

Eastern Division, No. 1: Under the direction of Chas. F. Rice, P. O. Box 245, Mamaroneck, N. Y., comprises New York, New Jersey, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, Delaware, Virginia, West Virginia, Kentucky, Indiana, Ohio and Michigan.

Western Division, No. 2: Under the direction of P. Douglas Anderson, Room 413 Claus Spreckels Bldg., San Francisco, Calif., comprises California, Oregon, Washington, Idaho, Nevada, Utah, Montana, Wyoming and Colorado.

Southern Division, No. 3: Under the direction of Frank Reeves, Stamford, Texas, comprises Florida, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, and Arizona.

Northern Division, No. 4: As yet there has been no director named. Prints for this division should be sent to Chief Album Director Louis R. Murray, 927 Ford street, Ogdensburg, N. Y. This division comprises Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota and South Dakota.

To the Members

As the director of the stereoscopic division, it gives me great satisfaction to report to fellow-members the progress made in this branch of our hobby.

The second set of stereo pictures are now ready, and those who have seen them are enthusiastic and insistent that I assemble the third set forthwith for distribution. This enthusiasm is not to be wondered at when one remembers the beauty and realism to be found in the stereoscopic picture.

I invite enthusiasts to join us. Send in specimens of your best efforts and enjoy the privilege of inspecting what others do in this fascinating branch of photographic work.

Fraternally yours,

LOVIC MEREDITH, D. S. D.

To the I. P. A. Members of Southern Division No. 3

I was surprised when I read in June issue that I had been made Album Director for the Southern Division which under the new plan is composed of Florida, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, Louisiana, and Arizona. I suppose this is the result of some letters I wrote making inquiry as to what had become of the circulating albums.

Be that as it may, the blunder has been committed, and the only remedy I see for it is for the members in these states to put forth their best efforts and send prints and assist in getting out an album befitting the section of the country we represent.

Please do not put this off until tomorrow—you know, tomorrow is always the next day. Send at once at least two of your best prints. Any suggestions as to getting out the album or the mounting of your prints will be appreciated. I am counting on your hearty co-operation, so please do not disappoint me.

FRANK REEVES

NEW MEMBERS

5279—J. Clarke Lennon, 125 South Tenth St., La Crosse, Wis.
Class 2.

5280—Mrs. H. A. Bean, 222½ Center St., Meyersdale, Pa.
All sizes up to 8 x 10, Artura, Iris, include babies and people of all ages. Also a small amount of home portraiture; for home portraits and photos of any subject with new or good lighting effects. Class 1.

5281—R. Ruthofer, Box 31, Tillamook, Ore.
Class 2.

5282—H. P. Nielson, M. D., North Madison, Ind.
2¼x3¼, 3¼x5½, 5x7 and 8x10 Azo, Mimosa and Iris of medical and surgical, general landscape and architectural; for landscapes, etc. Class 1.

5283—W. D. Sell, Box 222, Charleston-Kanawha, W. Va.
Class 3.

RENEWALS

504—Wm. A. Bixler, 1212 W. 10th St., Pomona, Calif.
Class 3.

5156—Frank B. Squier, Conklin, Michigan.
2¼x3¼ and 3¼x5½ of scenery and action; for nude and anything of interest. Class 1.

5158—Henry A. McGinn, Dixon Cor's., Ontario, Canada.
Class 2.

Notes and Comment

Reported by Wm. Wolff

W. S. Valentine of Redding has a gem in Miss Ruby McCormack, who assists him in his gift shop. She is a brunette—very vivacious.

Marion Owens of the Ing & Allee Drug Company spent first two weeks in August at Lake Tahoe, where she obtained some very fine pictures.

Sarah Lowe of the same concern just returned from vacation at Vacaville. It is rumored she took up swimming to reduce.

J. F. Zink of Chico has had his studio closed one month. He sure enjoyed his vacation work on his ranch.

E. Hislop has taken over the Alexander Studio in Chico. Mr. Alexander passed away two months ago.

Mrs. H. Sackrider of Marysville is taking a much-needed rest. She is visiting friends in San Francisco.

Harley Frederick of Sacramento is buying some new furniture for his dining room.

The Seventh International Salon of Photography

Held under the auspices of the Camera Pictorialists of Los Angeles, in the Gallery of Fine and Applied Arts of the Los Angeles Museum of History, Science and Art, at Exposition Park, Los Angeles, California, from October 15th to November 5th, 1923, inclusive.

Selection of prints will be made by a competent jury of selection, and only prints exhibiting the highest degree of pictorial merit will be hung. All prints submitted must be entirely the work of the contributor.

Foreign contributors are urged to forward prints at the earliest possible date.

Last day for receiving prints September 26th, 1923.

In recognition of the position which pictorial photography occupies today in the realm of art, the Los Angeles Museum has determined to establish a permanent collection of pictorial photographs. For this purpose a fund has been provided for the acquisition from this and subsequent salons of prints, to be selected by a special jury, which are to form the nucleus of this collection.

Entry forms are now ready and may be secured from N. P. Moerdyke, secretary, 811 Washington Building, Los Angeles, California.

New Retouching Pencils

A. W. Faber, Inc., have recently placed on the market a new line of positive retouching pencils and leads. They are a substitute for a brush and ink, and should meet with instant approval.

The Romance of Old New England Rooftrees. By Mary Caroline Crawford. Large 16mo, bound in cloth with a rich design in gold, gilt top, illustrated with 32 full-page plates in duogravure, many of which are from rare prints. Boxed, $2.50.

A romantic history of the surviving old mansions and rooftrees of New England and of the people who have called them home. Much interesting information and historical material of inestimable value are to be found in this book.

"History as strange and as fascinating as any novel. . . . It will make many of the events that have seemed dim and misty to many of us stand out in vivid colors."—Cleveland Leader.

Increased Business

The Agfa Products, Inc., has succeeded the Sagamore Chemical Company, Inc., and moved into larger quarters at 114-116 East 13th street, New York. The new company is now handling all the Agfa products, including the films, color plates and chemicals.

Entries for Emporium Photographic Exhibition To Close September 20th

News that a great many more entries than in previous years are being received has caused many hesitating pictorialists to speed their plans for entering the third Annual Photographic Exhibition of the Emporium. A large number of pictures are arriving from Eastern club members. The final day for entering has been set for September 20th, so not too many days remain for those who wish to compete for the liberal prizes.

Another announcement that is increasing the number of entries is the location of the exhibit. This year plans call for the holding of the display on a main aisle of The Emporium's first floor, where many thousands pass on a normal business day. That far more people will see this exhibition than any other held locally cannot be doubted.

The judges have not been definitely selected as yet, but the lists suggested give the management a very capable field from which to choose.

Your prints should be sent to The Emporium, San Francisco, California.

Convention of the Photographers' Association of the Pacific Northwest

The Photographers' Association of the Pacific Northwest will hold their yearly convention in Victoria, B. C., the last four days in August. The program has just reached us, and we urge you not to miss it. It includes talks by John Vanderpant, Miss K. L. Gunnell, Charles Aylett, I. C. Bogardus, H. P. Muchlenbeck, J. C. Abel, George I. Warren and others; also the International Exhibit from Washington, D. C., moving pictures, "A Trip Through Film Land," and lots of other interesting things. It is not going to be all serious business either, for they promise side trips through their beautiful scenery, baseball games, etc.

Photographers of San Joaquin Valley to Get Together

Mrs. Ednah M. Morrison of Visalia is planning a meeting of photographers in Visalia during the week September 10th to 15th. She plans to use the loan exhibit of the Photographers' Association of California and to have interesting speakers. Mr. E. M. Hammond of Porterville will talk on advertising, and there will be others, so that it promises to be a meeting of unusual interest. We know it will prove profitable to all attending, for we know Mrs. Morrison. She is a member of the Photographers' Association of California and an enthusiastic one. We are always glad to see her at our San Francisco meetings.

Convention at Des Moines, Iowa

The North Central Photographers' Association, which holds its convention in Des Moines, Iowa, September 24- 25- 26- 27, is the next big meeting that is of special interest to photographers in Iowa, Minnesota, North and South Dakota, Wisconsin and the northwest part of Nebraska.

The officers of this Association have been working all year on a program that would make the strongest appeal to photographers. If it were the custom to give a program a title, the name of this would be "More Money—How To Make and Save It."

The business side of photography is the main issue, not only creating and attracting new business, but conducting a business to show profit at the end of the year. Demonstrations and workmanship, however, have not been overlooked. A novel feature will be introduced for members to see some leading photographers in their respective lines make actual demonstrations.

The Fort Des Moines Hotel is ideal for holding a convention of this kind. The banquet hall, with nearly 5000 square feet of floor space, will be used for manufacturers and dealers.

Plan now to make up some of your best work for the picture exhibit. J. R. Zweifel, first vice-president, Duluth, Minnesota, will gladly furnish information on this subject. Your dues ($3.00) should be mailed to the treasurer, Thorwald Lee, c/o Lee Bros. Studio, Minneapolis, Minnesota. President H. E. Voiland, c/o Genelli Studio, Sioux City, Iowa, will welcome any suggestions or ideas for the convention. For any information not pertaining to exhibits or dues write the secretary, F. H. Smith, Ida Grove, Iowa.

R. T. Dooner Honored

R. T. Dooner, president of the Art Week Association, has accepted the invitation of the Royal Photographic Society of Great Britain to serve as judge of the photographic exhibits in the Royal International Salon which opens in London September 17th. He will sail from New York on Thursday, August 9th, to reach London in time for the preliminary judging on August 23rd.

The Royal International Salon is a world-wide collection of photographic art to which hundreds of talented photographers send their best work. The Royal Society established a precedent last year in inviting Pirie MacDonald of New York to serve as a judge. No other American had ever served on the board.

An Opportunity for the Professional Photographers in the State of Washington

Three $25 cash prizes for the best photograph of a man, of a woman and of a child are being offered by the Washington State Fair to be held at Yakima from September 17th to 25th. Only professional photographers in Washington may enter and they are permitted to enter three portraits each. These portraits may be of one subject, or one of each subject or two of one and one of another. For details, address Mary Remy, Dept. Chairman, R. F. D.1, Yakima, Washington.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

California Camera Club

Miss Kathleen Dougan will make a "one woman" exhibit of her work on our walls from August 15th to September 15th. Her collection contains pictorial, portrait and theatrical studies. Miss Dougan has a national reputation, and we are glad to give you this opportunity of seeing her work.

The Newark Camera Club

Every Monday evening the club keeps open house, to which all interested in photography are invited, and our many visitors receive a cordial welcome. Generally, there's a bite to eat and a cup of something that cheers but not inebriates, and there are frequent demonstrations of the various photographic processes given by experts in each line, which assist in keeping the members up to date in photographic matters. There are also frequent lantern-slide shows, the work of leading workers in this country and abroad, so that, in the long run, our Monday evenings have the movies beaten to a frazzle as an opportunity to pass an enjoyable evening.

Blue Bell Camera Club

There is room for a lot more pictures in the Detroit Camera Shop Competition, which runs until October 1st. Get into the game and you will greatly benefit by having the incentive to turn out the prints. Prints must be 4x5 or larger, and should be mounted. Each week the prints are judged by five people independently, who each select the five best prints according to their judgment. A judge's first choice counts five points, second choice four points, and so forth, so that a print may receive any number of points up to 25. The three prints getting the highest number of points will be retained until October 1st, when the eighty-odd prints will be judged to find the four winners for prizes. The prints must be delivered to the Detroit Camera Shop, 415 Grand River Avenue, by 1:00 p. m. on Tuesday of each week

The subjects

Sept. 4—Portraits.
Sept. 11—Portraits.
Sept. 18—Still Life.
Sept. 25—Still Life.
Oct. 1—Miscellaneous.

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A Photographic Monthly

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CONTENTS FOR OCTOBER 1923

Cover Design—Mt. Evans from Window Ledge (Colorado).....By W. R. Potter
Reginald Travers as Shylock (Frontispiece).....By Kathleen Dougan
The San Francisco-Oakland Salon, 1923.....By Henry A. Hussey 455
Opening Glass-Stoppered Bottles.....By R. L. McColm 460
Finding Forgeries and Forgers by Fotografy.....By Chauncey M'Govern 462
Hello, Daddy (Poem).....By Florence Presley 470
Orthochromatic Photography.....By H. J. Devine 471
The Third Annual Japanese-American News Photographic Exhibition.....By H. Shishimoto 476
Tiny Insects As Seen Through the Magnifying Eye of the Camera.....By J. G. Pratt 478
Making Your Own Album.....By O. K. Wiandt 481
A Case for Your Photograph.....By Frank Stratton 485
Editorial.....486
The Passing of Alphonse Hirsch.
For the Professional.....487
Photographers' Association of America—Photographers' Association of Pacific Northwest—Photographers of the Pacific Coast—Photographers' Association of California.
The Amateur and His Troubles.....492
The Box Brownie Camera.
A Copying Stunt.....By R. L. McColm 495
A Photographic Digest.....496
Bromide-Chloride—Wet-Collodion—Some Causes of Failure in Autochrome Work.
Art and the Crafts.....500
What is Pictorialism?
Club News and Notes.....501
Notes and Comments.....502
International Photographic Association.....503
Cutting Odd Size Plates.....By R. L. McColm 504

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But, since I am a dog, beware my fangs."

KATHLEEN DOUGAN
Berkeley, California

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
EDGAR FELLOES, Associate Editor
P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX OCTOBER 1923 No. 10

The San Francisco-Oakland Salon 1923

By Henry A. Hussey, San Francisco

EDITOR'S NOTE.—The Second San Francisco-Oakland Salon, 1923, will be on exhibition, either in San Francisco or Oakland, until November 11th. Therefore we have divided the reproductions of the photographs selected for CAMERA CRAFT so that some will appear in this issue and some in the November issue.

The Second San Francisco-Oakland Salon opened at the Palace of Fine Arts with a private view on August 31st, and will be open to the public daily thereafter till October 7th. The prints are then to be moved to the galleries of the Oakland Art Association in the Oakland Auditorium, where they will be on view from October 14th to November 11th. Two hundred and fifty-two prints meet the high standard set by the jury: J. Nilsen Laurvik, Director of the San Francisco Museum of Art; William H. Clapp, Director of the Oakland Art Gallery; John Paul Edwards, and Louis A. Goetz, Pictorialists.

Selection was greatly facilitated by the use of an electric voting machine developed by Mr. Clapp. Each juror had a push button, operation of which indicated approval or otherwise, the machine being so arranged that the vote was secret from the members of the jury, leaving them perfectly free to give their entire attention to the prints, there being no occasion for discussion unless a tie vote developed.

It is difficult to review a Salon and give any idea of the prints, without reverting to a recounting of the catalog. Perhaps the greatest benefit to those interested in Salon work will be an attempt to point out some of the tendencies, and perhaps draw some conclusions from the result of the selection, considering not only the prints accepted, but equally important, those that were not.

First is the decrease in the number of very soft prints submitted. The vogue of the "fuzzy" is decidedly past. There is a better understanding of the great possibilities of the soft focus lens, and also an appreciation

of its limitations. Lens work and focusing are better done, there being little evidence of double line, halo, and excessive vagueness, prints suffering from these largely falling by the wayside,—soft if you please, but yet with firmness.

After the selection had been completed a comparison of the ratio of acceptances to submissions shows a remarkably close similarity, gum, bromoil, platinum or paladium, carbon, and straight projection coming out almost the same. The only notable exception is in the bromoil transfers, most of which were sent in by workers from abroad who have long been using the bromoil and transfer processes. All of which shows that in the end one medium may be as good as another. The picture is the thing, not the process, unless the medium adds to the pictorial quality of the result. Process alone will not make a successful print, and a technically poor print by any process is a failure.

Bromoil has taken a great hold in this country, as many have sent in all, or part of their work in this medium, probably for the first time this year. A considerable number of the prints submitted show need for more practice in the technique of pigmenting, and moderation in the amount of "control" attempted, or are characterized by a heaviness due probably to a desire to get richness, sacrificing detail in shadows and half tones. Another year will undoubtedly see many of these faults, remedied, and a cleaner, brighter tone in the work. Among the bromoil prints is Raymond E. Hansen's "Woodlands in Winter," giving excellent sunlight effect on snow, a particularly difficult subject to attempt in this medium. "The Old Home," by Sophie Lauffer, is reminiscent of the European work in that the treatment is light and delicate, while in "Full Time" the opposite treatment is used by W. W. Zieg, giving richness and boldness. "The Lantern," by Louis A. Goetz, which is reproduced, is a masterpiece of technical and pictorial work. Three prints by Leonard Misonne of Belgium are much alike in their treatment, and in different mood than any others.

One of the most interesting and instructive features of the Salon is the collection of bromoil transfers, all but two of which are from abroad. They differ from the straight bromoils of our workers in that there is greater delicacy and detail, and that the prints are usually of smaller size. The group of Fred Judge presents five pleasing and simply arranged subjects, delicately handled, particularly in the middle and distant planes. The Vienna group is headed by Adolf Fritz with six prints, Karl Suchy, and Leopold St. S. Vernouille, all work in small size, six by eight or less, in light mood with simple subjects, the excellent technical treatment of which adds to their pictorial quality.

Gum is not used by many this year, and the same comment may be made on several of those submitted as noted in the bromoils, too much pigment, the prints being oppressively heavy, and failing on this account. "The Arches," by William Gordon Shields, retains the effect of sunlight and

STACKS AND FUNNELS
(Second San Francisco-Oakland Salon, 1923)
By JOHN PAUL EDWARDS

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man," Thos. Sheckall's two prints of snow-covered hills and mountains, Blickensderfer's "Evening at the Timber Line," Hanna's "Summer Sky," Monument Valley, and Anderson's "Call of the Hills." Several contributors from abroad have fine landscape work, notably Whitehead, Judge, Max Schiel, and the Vienna group already mentioned.

Portraiture and character studies are well represented, particularly by prints from abroad and the West. Aage Remfeldt of Christiana has a very striking portrait of Mrs. M., while Lionel Wood and Charles Borup represent England. W. E. Dassonville of San Francisco, using a hand-coated silver paper, secures wonderful richness and quality in his portrait of Wm. Keith. Eugene P. Henry has a very successful large head in bromoil. H. V. Schieren's "Cowpuncher" is full of character and contrasts, while Paul De Gaston's "Dreamer" is in quiet mood conveying all the meaning that the title suggests.

Buildings and structures, or parts thereof, are much used, either as architectural subjects, or as a foundation on which to build pattern in light and shade, or design in lines and angles. Probably more prints fall in this category than any other. John Paul Edward's "Stacks and Funnels," Hagemeyer with three prints in angular arrangement, Harding's "Greek Theater," Dr. Ruzicka's Pennsylvania Station prints, Charles K. Archer's "Sunlight on the Floor," Harting's "Through the Window" and Vanderpant's "Window Pattern" are a few of the many. In more purely architectural style are two cathedral doorways, one in gum by Mrs. Hervey, and one in bromoil by the writer.

There is a decided trend toward the use of "bits" of things that will yield pattern, design, or decoration, particularly by workers in this country and undoubtedly accounts, in part at least, for the falling off in the number of landscapes and marines. Even in still life and genre subjects the seeking for pattern or decoration is evident, as in Clara Sipprell's "Rose in Glass," Ralph Young's "Stork," and Dr. Nilsen's "Three Elephants."

The prints are hung as last year under glass in large frames about two and a half by four feet, averaging three prints to a frame, in a single row at convenient viewing height. This arrangement requires a large amount of wall space, but gives ample room to each print, and a very effective presentation. The number of prints shown is about as many as can conveniently be viewed at one time without confusion and fatigue. All those who can should avail themselves of the chance to study the prints and processes with a view to learning the possibilities of photography as a graphic art.

OPENING GLASS-STOPPERED BOTTLES

When your glass stoppers refuse to budge, try this simple dodge: Tap the stopper lightly upward with a closed pocket-knife, going around and around the stopper. Once or twice around and the stopper will lift out easily.—Contributed by R. L. McColm, Asbury Park, N. J.

THE LANTERN
(Second San Francisco-Oakland
Salon, 1923)
By LOUIS A. GOETZ

Finding Forgeries and Forgers by Fotografy*

How the Fotografic Film May Be Utilized to Record and Illustrate Clearly to the Layman's Eye the Covered-up Steps of the Perpetrator of Frauds in Documents of Every Kind and Description

By CHAUNCEY M'GOVERN

Hearst Building, San Francisco, California, Author of "Preparing for Trials Involving Forgery," Etc.

(EDITOR'S NOTE.—Previous articles in CAMERA CRAFT by Expert M'Govern have been copied copiously in the leading periodicals of Europe, Asia, Africa and Australia, as well as of America. In addition, there have been received a remarkable number of letters from subscribers in those countries, as well as in the smallest communities in the various quarters of the United States, asking for further facts about the making of negatives for the use of the Courts. As a consequence, the editors have made arrangements with Mr. M'Govern to write a series of articles on this subject, illustrated by his Foto-MICROGRAFS of actual cases.)

THE GREATEST of all the tools or instruments used by the down-to-date handwriting expert today in his science of analyzing documents in dispute is the fotografic film.

It is true that the use of the microscope and of various chemicals are today as necessary for the successful analysis of questioned writings as they formerly were. But the more modern handwriting experts,—the younger generation of experts who are winning the big battles in courts in trials involving forgery,—are using today the fotografic film more and more extensively—and intensively—to lay bare the truth to the eye of the court and jury. Even Chemistry and Microscopy, in the hands of the handwriting expert, are many times more effective in uncovering the real truth —to both expert and the layman jury—when that Chemistry and that Microscopy are utilized in conjunction with the fotografic film.

There are still appearing in the law courts—both in America and abroad—numbers of "old-school" handwriting experts who express their opinions of writings in question on what they themselves see in the writings thru the microscope alone, or what they themselves have seen to be chemical reactions in writings when they personally applied to the ink-marks certain acids or alkalies. But it is a common occurrence that the verdicts of the judges and juries are won by that side of the controversy whose "new-school" experts make actual demonstrations with fotografic films,—that is, with "contact prints" and "bromide enlargements" from these films—to show clearly and convincingly to the court and jury what the microscope actually reveals.

Why? Only a comparatively few people on any jury can actually see anything clearly thru a microscope, and those who can so see may observe only a single letter or a fraction of a letter—at one time, without moving

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the document under the lenses of the instrument. But in the hands of a trained expert on disputed documents, the letters and words of an entire document in question can be so fotografed that the judge and jurors, without the aid of even their own spectacles, can see a scientifically-correct copy of the entire document enlarged to as great a size as 200 times (and even more) the area of the original.

On top of all this, the fotografic film can be made to correctly record various features of the document that no human eye,—not even the eye of the best-trained expert,—can perceive in the document itself with the aid of the most powerful microscope. For simple reasons (explained in a later paragraf) there can be plainly brought out, in a fotografic film, ink-writing chemically-removed from a cheque, will, or other document; or writing added to the original writing in different ink of same color; invisible writing; the shadows of writing; and a host of other important features of questioned documents,—when a direct examination of the original paper, with the best of glasses, would reveal nothing at all suspicious.

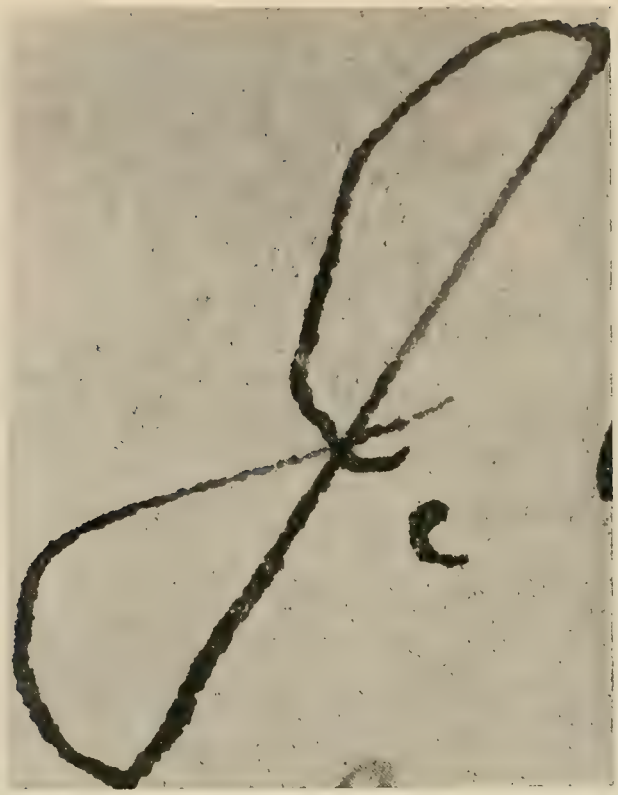
Time was when judges and jurors listened to the opinions of various experts without fully understanding the mysterious mazes of those experts' minds in reaching their opinions. But today the experts whose sides are winning verdicts talk plain every-day, grocery-store English to the judges and jurors, and tell them in non-technical language just HOW and WHY the expert opinions held are reached. And when experts exhibit fotografic films—negatives—and show the lens by which they were made, and then show the contact prints and the bromide enlargements produced by those negatives,—it is no mere guess-work to figure out what the verdicts will be.

All Questioned Papers Should Be Fotografed at Once

Every document in dispute should be fotografed immediately it is "questioned" in any respect—whatsoever—by anybody. It is better for all parties concerned that the negative be a "Foto-MICROGRAF": That is, it is better that the negative be larger than the document—or the suspected portion—itself. Personally, I make all my negatives on films 11 inches by 14 inches. And while I find it advisable, sometimes, to make the negative smaller than the original,—when the original is larger than 11x14 inches,—my years of experience induce me to follow the practice of making the letters in the negative direct enlargements some 10 to 50 or 100 times larger (in area) than the original sizes.

The first object of having every document fotografed is to have a "true copy," so that if the document become soiled or torn or is lost, duplicates of a true character can be made immediately.

But the second and main object of the negative-making is to ascertain if the NEGATIVE will not show features of the writing, or suggestions of features of the writing—either visible or invisible—or erasures by chemicals or by steel tools, etc., which are not visible to the human eye,—not even with the microscope.



No. 1—TO PROVE that the "J" (with the remainder of its signature) was written AFTER the paper had become GREASY and had been FOLDED many times; engraving one-third size of original negative. Panchromatic film; no screen; ABC developer; Wollensack, 2-inch 6.3 lens; 22 stop; 20 minutes' exposure; oblique light from two 250-watt Mazdas, placed right and left of object-board. . . . This Foto-MICROGRAF resulted in a confession by which a widow won a $250,000 lawsuit, without finishing court trial

A Pleasing Instance Where Fotografy Helps a Widow

A little story to illustrate a case in point: A young widow held a document wherein appeared the word "May" (written in PENCIL, as was the rest of the document). The surface of the paper right in that spot was OBVIOUSLY somewhat ROUGHENED, thru some OTHER WORD, or part of a word, having previously been written in about the same spot—and "eradicated" with a pencil eraser. If the original word or part of word was "June," the widow would lose her $10,000 farmhouse; while if the original writing had been "April," or enuf of that word to prove that the writer had first written the paper BEFORE "June," the property remained with the widow. . . . Nobody could read the eradicated word to the satisfaction of the Court. . . . Fotografy was brought into play. But the USUALLY dependable "Process" film proved NOTHING beyond the fact that SOME OTHER WRITING had been there before the "May." Foto-engraving of a Foto-MICROGRAFIC contact print on "Process" film, printed on "Contrast" paper, is attached. (Foto-Engraving No. 8.) . . .

After much "experimenting," however, I so placed the document before the lens that the LIGHTING came from a single "arc" lamp placed obliquely TO ONE SIDE ONLY of the document; two such lamps had been used on the "Process" negative which was not satisfactory to me. This time I used a "Panchromatic" film, slightly but purposely UNDER-timing the exposure, and using EXTRA WEAK developer. RESULT: Enuf of a capital "A", with a small "p" of a "loopless" and "angular" "lower extension," together with part of small letter "r," showed so plainly on the contact print (the negative was 25 areas larger than the original writing) that the judge was immediately convinced that the word "Apr" had been first written down by the writer of the document, on May 1st, 1923, when the month of May was still young, and that immediately realizing the month of April had elapsed, the writer, the widow's recently-deceased husband, had "rubbed out" the "Apr" and then OVERWROTE the word "May." . . . Another of the many cases where FOTOGRAFY vitally assisted in the Triumph of TRUTH. . . .

The third object of the negative is to be able to provide each juror, the judge, and each lawyer, with a contact print of the copy, so that it may be studied at close range during the trial. Before the trial, each attorney or interested party may thus closely study the features of the document which are questioned, without the danger of injuring the original paper to the extent that it would no longer be fit to use in court as the original exhibit in the case. Then too if any ALTERATIONS are made in the original paper after it has been filed in any suit (which does frequently happen, though seemingly incredible), the criminality is surely discoverable in due time, to save the innocent party from loss—the alteration being proven by the original fotograf. And the fact of the paper having been fotografed tends to deter the criminal from attempting to fabricate some part of the document the authenticity of which has already been questioned.

It is often not necessary to fotograf the questioned document in its completeness. But it is always safe to go to that expense while the main negative-making is confined to that particular signature, or body-writing, or interlineation, or erasure, specifically described in the lawsuit filed regarding the document in question.

Large negatives, 11x14, are best. It is of course possible to make a bromide enlargement of all of a document, or of part of one, from any small-sized sharp negative, but there is awlays some degree of "fuzziness" in any bromide enlargement of writings. Hence the desirability of making the enlargement of the writing as large as practicable ON THE NEGATIVE DIRECT.

During the trial in New York City of a will case where forgery was charged, a woman witness was so positive in her identification of the signatures of the testator and of the witnesses,—altho all of them were then dead and she herself stated she was present only by accident—she went into such minute details as to relate how the testator had dropped several

No. 2—TO PROVE that the word "of" was written with blue-black ink and NOT BLOTTED; that semi-circular line was done with a "lead" pencil AFTER that ink was thoroly DRY; and that the word "Feb" with diagonal cross-line (cancellation line), was done AFTER word "of" was thoroly DRY (several days), and that both "Feb" and cancellation line were both done WITHIN A FEW MOMENTS of each other; that neither of the two was BLOTTED, and that the word "Feb" was written AFTER the cancellation line was placed on the paper; proving that ALL the writing was NOT done at the SAME sitting, as alleged. Courts award hundreds of thousands of dollars as a result of such Foto-MICROGRAFS made by Chauncey M'Govern. . . . Panchromatic Process Plate; Velox Developer; 48 mm Micro-Tessar lens; distance from lens to paper about one inch; 22 stop; no screen; 25 minutes' exposure; lighting, two Cooper-Hewitt mercury lamps, placed obliquely right and left of object-board.

ink-blots on the paper just because he was shaking his pen before beginning to write. Which remarkable "memory for detail" caused her the loss of the case; for the expert for the other side, who was present in court, remembered that those blots were NOT on the will when he had fotografed the document itself a year before. All he had to do was to show the fotografic negative he had made the previous year—before the blots had been accidentally dropped on the document by the court bailiff.

Another striking story, illustrative of the desirability of having all documents in dispute fotografed immediately, was told me by the late William J. Kinsley, Handwriting Expert, of New York, who did Trojan work in bringing about the use of the fotografic plate in Court work: "In a case where typewriting was in dispute, and the document was written in French, a microscopic examination showed that the 'accent' marks had been

inserted with a pen," Kinsley told me. "This was proof that the document was not done by the French-charactered machine of the party who was alleged to have written it on his own typewriter. . . . But when the document was produced in the court room during the actual trial, the expert for the defense discovered that the most prominent and palpably-added 'accent' marks had been covered by ink-blots,—with every appearance of having been dropped there 'accidentally.' And the criminal would have been able to put the forged document across, if it had not happened that the expert for the defense had taken the trouble to fotograf the document when he had had the chance of examining it, before the matter got to court, some twelve months previously."

What Lenses and Films and Lights Are Best for Document Fotography

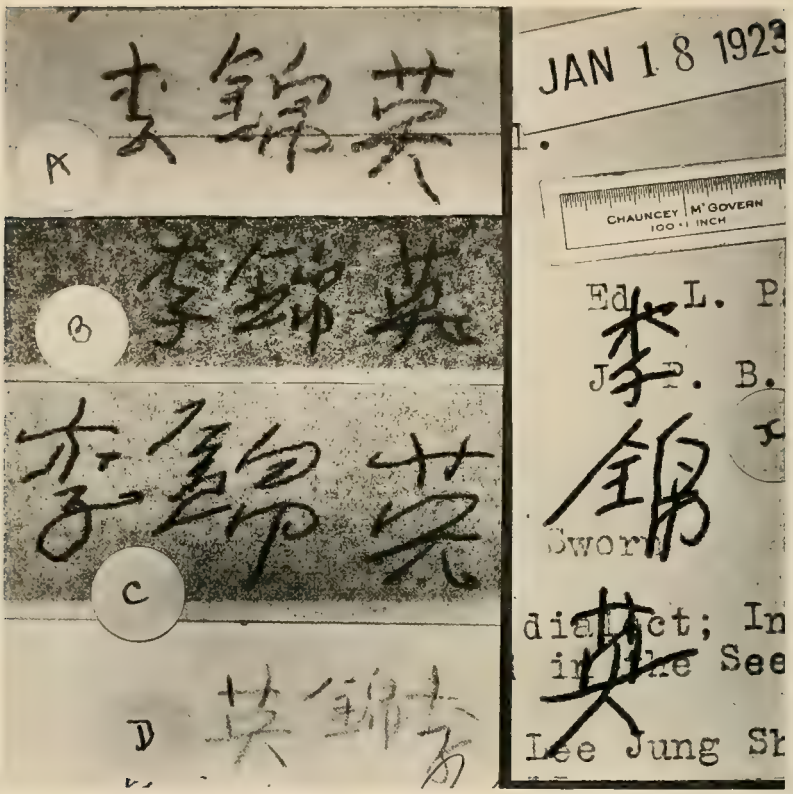
Not every film and not every lens—nor yet every sort of illumination—is suitable for the making of fotografic negatives that are to tell their own story in court. The lens used for a particular negative must be selected for the focal length insuring a covering-power sharp to the edges at a great degree of enlargement. And the chemicals in all "dry-films" being somewhat different, the chemical constituents must be borne in mind for each different negative exposed. As a general rule, lenses of from 12-inch to 1 1-3 inch (32 mm), equivalent focus of f 6.3 or f 4.5, are ideal.

What lenses and what films to use for specific purposes, and what should be the kind of illumination (as well as its position in relation to the writing fotografed), may be calculated from a study of the illustrations accompanying this text, each engraving indicating how its negative was produced, as to lens, film, lighting and position of illuminant.

As to the camera itself, any of the professional makes—with a ground glass fitted for microscopically-exact focusing while using an extremely dim light—will suffice. Personally, after years of experimenting, I do quicker, easier and more effective work with a "Folmer & Schwing Commercial Camera," taking films 11 x 14 inches. Cones, specially made, with "adapters," I attach to the regular camera when using lenses of 4- to 2-inch focus or less.

Any sort of a "stand" or table will do, but I personally prefer the "F & S" Laboratory Stand, which permits of rapid and easy tilting of the camera and document simultaneously. This is an almost indispensable contrivance when the writing to be fotografed is on a page of a heavy, thick, large-leafed book. To place the book inside of a large, roomy foto-engraver's printing frame while being fotografed, the printing frame placed parallel to the object board on the stand, is also a great convenience.

In my seeking for more exact results, and with the least expenditure of my time and physical effort—though not of financial cost, for this I never consider—I use a focusing-cloth made especially of sateen, jet black, three yards square, and of double thickness. This serves to really exclude all light—a most essential exclusion when making negatives that enlarge



No. 3—TO PROVE that Chinaman Lee Jim Ying, who wrote Chinese signatures A, B, C and D with pencil, did NOT similarly write disputed signature X. . . . Documents so folded that only signatures show; papers held in place by being placed between two sheets of plate glass; 12-inch II-B Tessar 6.3 lens; 32 stop; Process film; Contrast developer; 4 minutes' exposure; two Cooper-Hewitt mercury lamps placed obliquely right and left of object-board

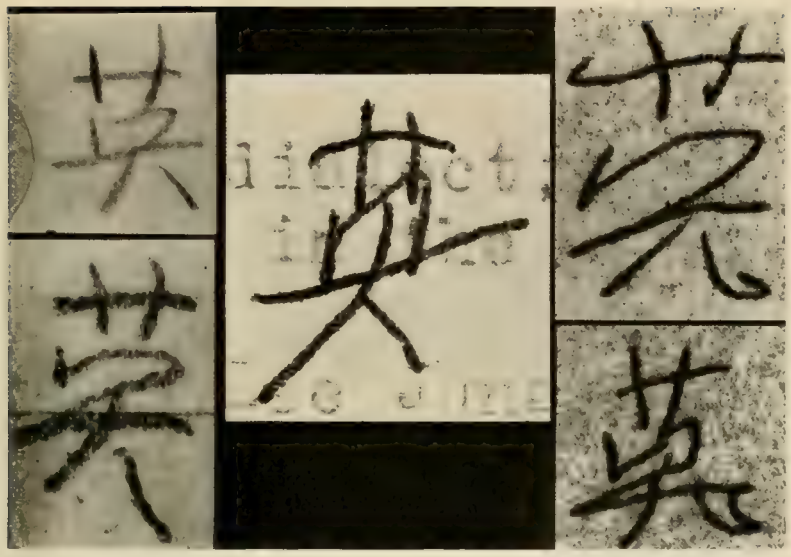
the writing into sizes greater than 25 diameters (equals 25 x 25 equals 625 areas of enlargement).

The burden of the extra heavy weight of the cloth I shift from my own head and shoulders to my specially-designed canopy of angle-iron (brass) screwed to the top of the camera back and extending backwards for two feet (from the ground glass).

To the camera I have added several "dials" or "plombs" to insure the film and the writing being in exact plane notwithstanding any tilting of the stand.

In order to facilitate focusing—that is, for getting the exact letter or part of a letter into the center of the plate without unnecessary and time-consuming shifting and pulling, I have designed a rack-and-pinion arrangement on the object board of the laboratory stand, for easy and sure "minute" shifting of document right and left.

(Continued Next Month)



No. 4—TO SIMPLIFY illustrations shown in No. 3; bromide enlargements made of each of the last "words" in the Chinese signatures; Velox "Contrast" bromide paper; Foto-MICROGRAFIC negative 11 x 14, enlarged with two Cooper-Hewitt lamps, 6 seconds' exposure

Reasons Why These Fotografic Illustrations Won Court Decisions:

The reasons why the original Foto-MICROGRAFIC illustrations were effective in the courts where they were shown by Expert Chauncey M'Govern is that: It is universally recognized by writers on the Science of Analysis of Documents in Dispute that:

(1) If a pen is filled with ordinary ink, and then placed on paper that is more or less "greasy"—from handling by moderately-soiled (perspiring) fingers—the pen will write "black" at first, but with a tendency towards "greyness" in proportion as it "takes up" into the ink a quantity of the grease spread over the surface of the paper, until finally the pen will not write at all. If the grease is removed from the pen, it will again write black until it begins to take up more grease, after which the greyish writing again appears;

(2) If the pen which has taken up "grease" from the surface of the paper strikes an OUTWARD FOLD in the paper, or the sides of a BROKEN SURFACE FOLD, the striking will CLEAN the pen of its grease—and the black writing will go on;

(3) If a Foto-MICROGRAFIC negative is made of a letter which **crosses** a FOLD in the paper, the illustration will, if common sense is used, show plainly whether the fold was made BEFORE the writing or AFTERWARDS.

(4) If a specified line (or word) of INK writing is THOROLY "DRIED" (in time, by exposure to the oxygen of the atmosphere) before a SECOND line or word is written, so that the second writing CROSSES

the FIRST, there will be NO "RUNNING" of the ink of either line into the ink of the other word or line. . . . But if one word or line is written, and, before the same is THOROLY "dried"—by "evaporation" or "oxidation"—and is CROSSED by a word or part of word done in ink—then the INK deposited by the pen, to make the SECOND word or letter, will RUN INTO the line or lines made by the FIRST writing—and this "running" of the SECOND ink-line into the first ink-line can be clearly and unmistakably seen thru the MICROSCOPE. At least, IN MOST CASES. There are some cases, however, where conditions are such that it is impossible to tell by this test which of the lines was made last. For such cases there are other means of examination;

(5) If one man is FORGING the writing of another man—English, Chinese or other writing—he usually thinks of "copying" in the forgery the GENERAL PICTORIAL semblance of the real signature. He is usually unconscious of the LITTLE details. A specific case: A Chinaman attempted to get into the United States, thru the Customs-Immigration bureaus, by FORGING the name of another Chinaman. (In the illustration signature X is the forgery.) But an expert on documents in dispute could not be fooled, even tho not understanding a single character of Chinese. After the Foto-MICROGRAFIC illustrations (from which Foto-Engraving was made, the contact prints being nine times larger than the actual signatures made by the two Chinamen) were shown to the Court, the forger was immediately ordered deported.

Hello Daddy

Hello, hello there, daddy my dear
This is Virginia—the phone's at my ear

I'm calling for you to come home straight away
For mother and I've had a long, lonesome day.

So shut up your desk, get your big overcoat
And fasten it tightly up round your throat

Then do hurry home to us, don't dare delay
Unless there's a candy shop right on your way.

—Florence Presley.

Orthochromatic Photography

By H. J. Devine, Cleveland, Ohio

It is well known among photographers that ordinary photographic plates or films give a very unsatisfactory tone rendering of all objects showing color. Red objects, for example, photograph as though they were black, yellow objects are represented in a dark gray tone, while blues and violets are represented as being very light in tone. In an ordinary landscape the blue sky photographs almost as light as the white clouds, the green foliage comes out darker than it appears to the eye, yellow flowers and the like are quite dark in the photograph, and red flowers or other red objects are almost black. In order to explain these peculiar results, it is necessary to understand something of the nature of light and color. We will, therefore, leave photography alone for the moment and say a little concerning the nature of light and color.

White light, such as sunlight, is made up of light of every color. Most of you are doubtless familiar with Sir Isaac Newton's classic experiment which first demonstrated the composite nature of white light. Through a small hole in the window shutter a fine pencil of sunlight streams. Ordinarily this, of course, would show as a small disc of white light on the screen opposite the window shutter. Newton, however, interposed in the path of the beam a wedge-shaped piece of glass, called a prism, which had the effect of altering the path of the beam in this direction and producing instead of the white disc of light on the screen, an elongated patch of gorgeously colored light resembling a section of a glorified rainbow. Newton's explanation of the phenomenon was that the prism of glass had resolved the beam of white light into the component colors of which it really was made up by deviating from their path the different-colored rays in varying degrees. The red rays were diverted least from their path, the orange more, the yellow more, the green more, the blue more, and the violet most of all. Newton further demonstrated that white light was again produced by recombining all of these colors by reflecting them from a series of small mirrors and superimposing them.

From these and other experiments, it was definitely established that white light really contains light of every color.

Let us now try to explain why objects appear colored. A beam of white light projected onto the screen from a lantern contains light of every color. If we place a piece of ordinary glass in the path of the beam, practically all of the rays pass through it. A piece of black glass allows none of the rays to pass, that is to say, it absorbs or quenches all of the rays. We now try the effect of a piece of red glass. This has the property of absorbing all of the colored rays in the light except the red and the orange, to which the glass is transparent. In other words, the glass has filtered out of the white light all of the colors but the red and orange. For this

reason such a piece of glass is called a color filter. A green filter placed in front of the projection lens filters out of the white light practically all of the colors, but green and blue filter filters out all but the blue and violet. Whenever one or more of the component colors are removed, either wholly or in part, from white light, the residue appears colored. A candle flame compared with daylight appears yellowish. This is because the candle flame emits relatively less blue and violet light than is present in daylight. It is a psychological fact that the eye regards white light from which the blue and violet has been removed as yellow. We project a beam from the lantern through a yellow filter and the light appears yellow, although if we analyzed the transmitted beam we would find present every color of the spectrum excepting blue and violet. That red is present, for example, can be shown by placing in front of the yellow filter a red filter. Since this filter is only transparent to red and orange light, and red light is present on the screen, it must have been transmitted by both the red and yellow filters. Substituting for the red filter the green one, we have green light upon the screen which has passed through the yellow filter as well as the green. A blue filter is said to absorb all but the blue and violet, hence a combination of this filter and the yellow one absorbs all of the color and thus gives darkness upon the screen. We see, then, that transparent colored objects appear colored simply because they selectively absorb certain of the colored rays in the white light and transmit others.

The explanation of color in the case of objects seen by reflected light is similar. A piece of red card appears colored because it can reflect red light very well and the other colors scarcely at all. A piece of yellow card can reflect all colors but blue and violet,and these other colored cards each have their own peculiar absorption properties. The color, then, is not really in the object but in the light that illuminates it. This so-called red card, for example, can only appear red if red light is present in the illumination. This fact can be easily demonstrated. Our blue filter we know does not appreciably transmit red light. We find that the red card, when viewed in the light sent through the blue filter, does not appear red but black. A green card viewed in red light appears black, a blue card viewed in yellow light appears black, and so on. Conversely, a red card appears light when viewed in red light, a green card light when viewed in green light, and so on. We shall see presently how photographers can make use of the properties of these color filters when photographing colored objects.

Men of an inquiring turn of mind wondered which of the colors known to be present in white light were most effective in making photographs. This question was clearly answered by exposing a photographic plate to the action of the spectrum of sunlight and developing the plate. When this experiment was tried with an ordinary plate, it was found that practically the only colors in white light that were effective photographically were the blue and violet and some hitherto unknown radiations invisible to the eye which lay beyond the violet of the spectrum. These newly discovered rays

SEVENTEEN MILES AS THE CAR FLIES
First Prize (Japanese-American Salon, 1923)
By KAYE SHIMOJIMA
Stockton, California

were named ultra-violet, beyond the violet, and they can produce very undesirable effects in aerial photography. Knowing that ordinary plates are to all intents and purposes blind to green, yellow, orange and red light, it becomes readily intelligible why photographs of colored objects made on such plates should show faulty tone rendering.

For many years it was believed that this weakness in photographic plates was inherent. Quite by accident it was discovered that by bathing the plate in solutions of certain dyestuffs its color sensitiveness could be extended. The first dye found with this property made the ordinary blue and violet sensitive emulsions sensitive to green and yellow light in addition. The color sensitiveness of an ordinary emulsion extends from the ultra-violet through the visible violet and blue to the blue-green, with maximum sensitiveness in the blue. Treatment with a dye of the kind mentioned confers sensitiveness right up to the yellow of the spectrum; that is to say, the plate becomes sensitive to every color of the spectrum except red and orange, although the plates still possess a maximum sensitiveness in the blue. Such plates are known as orthochromatic and are extensively used today. They are a great improvement on the ordinary plates, since they enable the photographer to secure good photographs of all colored objects except those that are orange, red and reddish-brown. Having succeeded in producing a plate of this type, investigators experimented with other dyestuffs, hoping to find dyes with which to treat the plates and make them sensitive to the whole of the visible spectrum. Suitable dyes were discovered and the plates treated with them are known as panchromatic plates. Panchromatic plates as made today, although sensitive to every color of the spectrum, are unfortunately still much more sensitive to blue and violet than to the other colors. This means that although panchromatic plates and orthochromatic plates will give a much more satisfactory rendering of colors than will an ordinary plate, blue and violet photograph too light owing to the plate's super-sensitiveness to these colors. It is possible to correct this weakness by making the photograph through a yellow filter of such a depth of color as to absorb the right proportion of the blue-violet light and allow the other colors to produce the right effect on the plate. The depth of filter used depends on the distribution of the color sensitiveness of the plate. A plate with relatively low sensitiveness to the greens and reds requires a deeper compensating filter than would plates that had good sensitiveness to the reds and greens. A standard set of yellow compensating filters is known as the "K" series. This series comprises K1, K1½, K2, K3 and K4, the filters becoming progressively deeper in color from K1. Since filters absorb some of the light to which the plate is sensitive, it follows that a longer exposure is necessary when using the filter than when not using it. The number of times that the exposure must be increased with any particular filter is given by the so-called filter factor; for instance, for a certain batch of panchromatic plates, the filter factor for K2 might be 5. This simply means that the

A PORTRAIT OF ARTIST
Second Prize (Japanese-American Salon, 1923)
By F. Y. OGASAWARA,
Portland, Oregon

exposure in daylight must be increased five times when using K2, and this particular batch of plates. The filter factor for any one of the series depends on the type of plate with which it is to be used. This article will be completed next month, and will tell of the photographing of subjects with ordinary plates and panchromatic plates.

The Third Annual Japanese-American News Photographic Exhibition

By H. Shishimoto

The Third Annual Photographic Exhibition, held under the auspices of the "Japanese-American News," San Francisco, took place at the auditorium of the Sutter Street Branch of the Y. M. C. A., this city. As in the previous year, this exhibition attracted much attention not only from Japanese photographers, but from American votaries of the art. The numbers of exhibitors increased to double that of the previous exhibition, proving that its popularity is growing.

About 300 pictures were shown equally divided into two sections—Art Pictures and Record Pictures. The Jury of award consisted of Mr. Sigismund Blumann, efficiency engineer; Mr. John Paul Edwards, photo pictorialist, and Mr. U. Kojima, manager of Yokohama Specie Bank, Ltd., San Francisco.

The winners of the prizes may consider themselves doubly complimented in that their work not only proved outstanding in comparison with the mass as shown, but may be accepted as worthy of the highest praise in any company. The following exhibitors were the winner:

Pictorial Section

First Prize—"Seventeen Miles as the Car Flies," Kaye Shimojima, Stockton, Calif.

Second Prize—"A Portrait of Artist," F. Y. Ogasawara, Portland, Ore.

Third Prize—"Mild Light," H. Ito, San Francisco, Calif.

Fourth Prize—"Parting," I. Asahi, San Francisco, Calif.

Fifth Prize—"Fishing," C. Midzutani, San Francisco, Calif.

Sixth Prize—"Decorative Study," K. Shindow, Sacramento, Calif.

Seventh Prize—"Fog of Valley," R. Morita, Alameda, Calif.

Eighth Prize—"Little Thief," T. Mayeda, Los Angeles, Calif.

Ninth Prize—"Isaak's Children," S. Shinozaki, Stockton, Calif.

Tenth Prize—"A Sunday Afternoon," S. Watanabe, Sacramento, Calif.

The first section included a large number of truly artistic pictures. The high standard of this section was established by its first prize picture, "Seventeen Miles as the Car Flies," by Mr. K. Shimojima, and is without doubt the most wonderful creation of all the pictures exhibited. It excels.

MILD LIGHT
Third Prize (Japanese-American
Salon, 1923)
By H. ITO
San Francisco, California

conspicuously among them, expressing real Oriental color. The photograph was taken on an early June morning using 4 by 5 Premo camera, fitted with a F:4.5 lens. Second prize, "A Portrait of Artist," by F. Y. Oagasawara, Portland, Ore., was taken at 4 P. M. in an artist's studio, with a Goerz Dagor lens. This portrait is of Mr. Barger, a well-known photographer in Portland. Third prize, "Mild Light," is a photograph of the Students' Club of the University of California, Berkeley. Mr. Ito used an Ansco camera fitted with a F:6.3 lens. He is recognized as an artist of no mean ability.

Record Section

First Prize—"Walking," A. Kawano, Los Angeles, Calif.

Second Prize—"Light," K. Iiida, San Francisco, Calif.

Third Prize—"Sun Dune," Miss Takako Yanagisawa, San Francisco.

Fourth Prize—"Moving Shadow," T. Yasaki, Los Angeles, Calif.

Fifth Prize—"Utah State Capitol," M. Nagashi, Utah.

Sixth Prize—"Beneath Willow Tree," Y. Bepp, Utah.

Seventh Prize—"Early Summer Afternoon," M. Yasuhara, Sacramento, Calif.

Eighth Prize—"Lively," Y. Higa, San Diego, Calif.

Ninth Prize—"Vine," K. Sato, Nebraska, Neb.

Tenth Prize—"Wave," T. Teramoto, Santa Barbara, Calif.

These photographs will be exhibited in Stockton, Sacramento, Los Angeles, Portland (Ore.), Oakland and Alameda after the showing in San Francisco.

Tiny Insects as seen through the Magnifying Eye of the Camera

By J. G. Pratt

With Illustrations by the Author

Photographing insects is a little specialty all its own, and not only requires special apparatus, but a considerable knowledge of insect life as well. They are usually so small that the photographs must be more or less enlarged in order to bring out their infinite detail and color, and for this purpose a camera with long bellows capacity and a highly corrected anastigmatic lens are necessary.

The optical principle involved is that with the bellows extended twice the focal length of the lens, the photograph will be natural size; extended more than this the object will be magnified. The camera is limited in this respect, however, as the depth of focus flattens out as the object is enlarged, so that at 15 diameters the lens will cover not much more than the thickness of a sheet of paper. It will be seen, therefore, that only the most minute objects can be photographed at extreme magnification.

THE CAMERA USED IN PHOTOGRAPHING INSECTS

The writer uses the camera seen in the photograph, mounted horizontally on a movable table for convenience, and employing a prism, operating like a periscope, so that the specimen can be placed on the rising and falling focusing table. This camera has a bellows capacity of sixty inches, and with a 3-inch lens will magnify objects up to twenty diameters.

Another difficulty encountered is that where an object might be taken natural size in a second or two exposure, at ten diameters, three or four minutes would be required, and as insects just won't stay still that long, it is usually necessary to kill them before taking the photograph.

Some soft-bodied insects, such as the tiny plant lice, seen on the rosebushes and other plants in the spring, can be stopped in their tracks by placing them in a jar for a few minutes, with a tuft of cotton saturated with a weak solution of cyanide. Beetles, however, are so tenacious of life that they are best killed by dropping them in boiling water until they are dead, and also limp, and then pinning them out on a sheet of cork in natural position until they are thoroughly hard and dry. The pins are then removed and the insect is placed in the appropriate background or setting desired for the photograph. Occasionally large insects which show up well without magnification can be photographed while alive, as was done in the case of the orange garden spider, which was snapped with one-quarter of

APHIDES OR PLANT LICE.
9 DIAMETERS

COMMON POTATO BEETLE.
5 DIAMETERS

a second exposure just as he was making a meal on the flies which had been caught in his web.

The most difficult of all insects to photograph are those such as mosquitoes and midges, which bear a close resemblance, as they do not submit to any method of treatment so far known. They are so frail that when killed they collapse, and leave a straggling mass of legs and antennae, and it is almost impossible to pin them into position without their coming to pieces. After many attempts, the midge seen in the illustration was photographed at seven diameters, showing perfect detail in the antennae and the markings on the body, although the legs are not what they should be.

The writer employs a novel method in preparing for the camera such minute insects as the various grain weevils, which are hardly more than an eighth of an inch in length. They are too small to pin into natural position, and heretofore where an illustration was desired it had to be drawn by the artist with the aid of a microscope. The weevil is allowed to crawl around on a piece of soft modeling clay, and at the right moment another piece of clay is slapped down on top, burying it instantly and preventing its legs and antennae from contracting, as invariably happens in the throes of death. It hardens in this position, and at the end of a few

ORANGE GARDEN SPIDER--NATURAL SIZE

days can be lifted out, cleaned in alcohol, and placed under the camera for the photograph.

Photographing insects is a most interesting though tedious operation, and as most of them are gorgeously colored, an additional problem is presented to the photographer in selecting the proper plate and the appropriate ray screen.

Making Your Own Album

By O. K. Wiandt, Covington, Indiana

With Illustrations by the Author

This article deals with the side of the amateur's photographic trials and tribulations that is not given the consideration that it deserves—at least the writer imagines so.

After one has exposed and developed the negatives, printed, washed and dried the prints, a sigh of satisfaction or relief escapes from one, and

A MIDGE, MAGNIFIED 7 DIAMETERS
(Illustrative of Article on Page 478)

the prints are either pasted in an album of black leaves or slammed into an old shoe box. Such is the life of the print.

One day I asked myself why not make my album as beautiful and attractive as I try to make my pictures. And right then I decided to do so. Being a printer by trade, I am somewhat acquainted with paper, and how to fashion it into a booklet or album. So I secured some dark brown ripple-finish cover paper, and made a cover—then smooth brown cover paper for the leaves of the album. These were stapled together into a book. (Brown was selected as a more pleasing color than black, as the latter color does not harmonize with anything but crepe.)

The next thing was to beautify the leaves of the album. The prints were trimmed to the desired size and pencil sketches of designs and borders were arranged on the pages. After this was completed, the designs were traced over with ink, the pencil lines erased, the prints pasted in—and presto! a page was before my eyes that was as far ahead of the black-leaf album as the camera of today is ahead of the kind our grandpa cussed at years ago.

A FLOUR-WEEVIL, 9 DIAMETERS A FLY, 5 DIAMETERS

(Illustrative of Article on Page 478)

Figure 1 shows a page from my album that has been treated just as described. So if the reader is interested enough to read further the writer will attempt to tell how to do it.

The printer in your town will make your album at a very small cost, binding it with ribbon, staples, cord, or more expensive binding if you so desire. A good stiff sheet should be selected for the cover, an imitation leather being very durable, and can also be secured in some very beautiful grains. The pages should be of a smooth, hard (not slick) cover paper of not less than 80-pound stock. (Sunburst cover paper is very good.) A soft paper must not be selected, as the ink lines will smear and the surface will rub off when the erasing is done. The color can be selected to suit one's taste, but remember that black ink is about all that will show well on dark brown and green paper, while brown, red, blue and green ink will show up to good advantage on light shades of brown, tan and yellow. If white pages are desired, select wedding bristle, as it is an excellent paper for such work.

Now that we have our album, we must now secure the following articles: A soft lead pencil, an art-gum eraser, a ruler, India ink (liquid), in the colors we wish to work with, a ruling pen and an ordinary writing pen. A T-square and angle will come in handy, but are not necessary. You may add a compass, equipped with a bow pen, if you want to use circles.

Select the prints and arrange them on the page until a suitable lay-out is found. Mark their position with light pencil lines. Then with the ruler make the lines and borders around the prints. Then comes the sketching in

FIGURE 1

SHOWING THE RESULT

of your lettering and lines and decorations. Go over the pencil lines with ink. For straight lines use the ruling pen and ruler—use the writing pen for curves and letters. After the design has been inked in, softly erase all the remaining pencil lines. Then one may paste in the prints and feast one's eyes on the pictures surrounded by artistic borders and decorations.

In Figure 2 you will see how the design is sketched in first with pencil and then inked in. After the inking-in is completed, the pencil lines are erased.

FIGURE 2

SHOWING HOW THE LETTERING IS DONE

At first the lettering will be rather difficult to the inexperienced, but a bit of practice will overcome all that. An instruction book of lettering will be worth purchasing, as it will show just how the different alphabets are made, and will also contain many different styles of lettering and designs.

A CASE FOR YOUR PHOTOGRAPHS

Several months ago I conceived the idea of a case for carrying small photographs. My camera takes a quarter-plate, and I often find it handy to have prints with me to show at certain times. When prints are carried loose in the pocket the corners get bent and broken. Often a picture will crumple up. My idea eliminated all this. I use it now all the time.

In a stationery store I bought a small loose-leaf notebook, about 4 inches by 5 inches. In this I carry the prints I want to show people. I use a masking device in the printing frame to get a white margin. When trimming, I leave a quarter of an inch extra on one side; that is, a quarter inch besides the regular margin. Through this tab I punch holes for the rings of the notebook.

One will find, however, that prints on single-weight paper will tear out. To overcome this, they may be mounted on cloth, printed on double-weight paper, or have the holes reinforced with Dennison's little cloth rings made for that purpose.

The advantage of this case is that prints are always changeable, can be grouped together, do not get bent or broken, and are always there. This makes a small case that can be carried any place, and when kept in one's coat cannot be forgotten, even though a portfolio of larger prints may be left at home.—Contributed by Frank Stratton, Lawrence, Massachusetts.

CAMERA CRAFT

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The Passing of Alphonse Hirsch

MR. ALPHONSE HIRSCH

The romance of business has its tragedies. In the height of his enjoyment of life and the fruit of long effort and persistence, Alphonse Hirsch, senior member of the firm of Hirsch and Kaye, was stricken in the library of the Olympic Club of San Francisco and died instantly. Though he had been in ill-health for over a year, his passing was unexpected and shocked a multitude of friends who knew him and his qualities

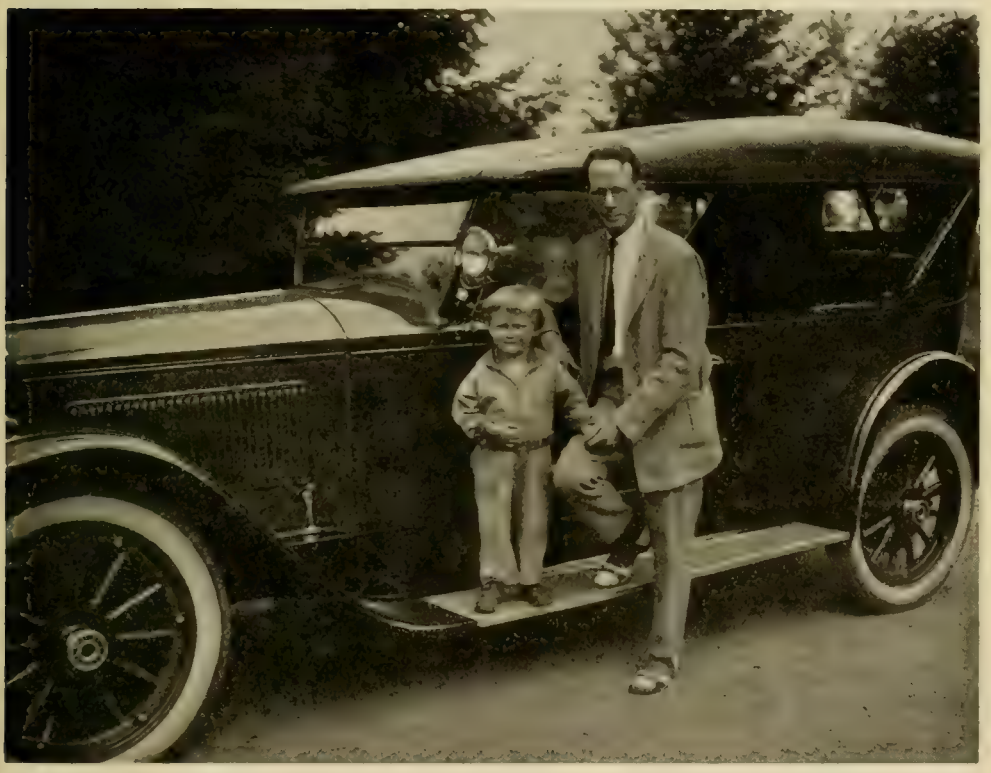
As founder of the business since March, 1886, he achieved much and maintained his ideals to the end. Civic affairs had a strong appeal for him: he was a member of the Board of Supervisors of San Francisco at one time, and in that capacity distinguished himself.

On the social side, his intimates knew him as a man of warm heart and philanthropic impulses. He was an accomplished musician, which his membership in the Loring Club betokens.

There will be no change in the business, which will be conducted under the same name by L. M. Kaye and his associates; but it will be a long while before the great vacancy will be covered by the smoothing hand of Time. G. A. D.

For the Professional

In the Interest of Commercial and Portrait Photographers



INTRODUCING CLARENCE STEARNS, PRESIDENT OF THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA, AND CLARENCE STEARNS, JR.

September 10th, 1923.

To the Members of the Photographers' Association of America

Greetings:

I have been asked to tell how it "feels" to be elected president of the P. A. of A. Well, my first feeling is a desire to express my thanks for the kindness that has placed me in a position filled at former times by so many great men in photography—men whose names might well make any comparison formidable to a far more worthy successor.

Then comes a realization of the great responsibility which goes with the office. To plan a way that the association shall be of the greatest possible service to the thousands of photographers of America is no small undertaking, and the members of the executive board are all determined to find the way.

We do not always realize how much service has been rendered in the past; for instance, if the association had not been watching over the interests of its members there is no question of a doubt but what there would have been a ten per cent luxury tax on photographs ever since the war, costing every photographer many times what he has paid for dues. This

A CORNER IN THE STUDIO OF CLARENCE STEARNS, ROCHESTER, MINNESOTA

coming year, through the efforts of our organization, we have every reason to expect that Congress will give photographs the insurance and C. O. D. privilege and, we hope, a change in the rate as well.

These are really minor services compared to what is being done to raise the general standard of our profession, and the question is not "does it pay to belong" but "can one afford not to belong." No business man would sneak into a ball game through a hole in the fence; it's a kid trick; and yet, while the association is working continually for all the photographers, many sit back with folded arms and do not even pay their dues.

Each of the five fingers of one's hand is individually comparatively weak when the hand is spread out. But close them tightly and immediately they become an instrument of great power—a fist. This is very true in our profession, and the sooner we "close in" and become a part of the one big family the more powerful will we become, both as a whole and as individual photographers. There are many good things ahead if you will all help—and you may feel sure that the new officers are all going in with one idea in mind—the old adage: "He profits most who serves best."

Very truly,
CLARENCE STEARNS,
President.

THE CONVENTION OF THE PHOTOGRAPHERS' ASSOCIATION OF THE PACIFIC NORTHWEST AT VICTORIA, B. C., CANADA

Photographers' Association of the Pacific Northwest

Since the convention at Seattle in 1922, the Photographers' Association of the Pacific Northwest has made a greater step forward than in any year so far on record. The 1923 convention at Victoria was a wonderful success and records the largest number of exhibitors and photographers attending than ever before in the history of northwest conventions.

Throughout the year the officers under direction of the President, Wilfred Gibson, kept the thought before photographers of the need of the Northwest Association. Letters and circulars were sent out from time to time to encourage membership; a cleverly designed membership seal was given with each membership for the use in the studio showcase or in the reception room. A complete printed price list was sent out to all members at different times, and perhaps best of all was the printed two-color "Code of Ethics" of the National Association bearing the seal of the Northwest Association, which was sent to every photographer whether a member or not.

At the 1922 convention, Seattle, Wash., President J. A. McCormick was successful in drawing up a set of "By-Laws," which were printed by the present officers in a neat booklet. These By-Laws were of great help to our board of directors through this term.

The above forms were edited under the direction of the Secretary, J. A. Zinn, Jr., and paid for by willing photographic dealers and manufacturers of photographic supplies.

Returning to the Victoria convention, it is a pleasure to have served as Secretary and Treasurer with Wilfred Gibson, President, and Ora L. Markham, Vice-President.

Perhaps one of the most gratifying things ever done by the Association of Photographers was the passing of the following resolution:

At a convention of the Photographers' Association of the Pacific Northwest held in Victoria, B. C., August 31st, 1923, the following resolution was adopted:

Whereas, a reserve fund has been created and now exists, in the sum of Three Hundred ($300.00) Dollars and to which additional sums may be added in the future; and,

Whereas, it is the desire of this Association that said funds be used for the sole

purpose of furthering the objects of this Association, and maintaining it properly and in order that its usefulness may be continued and enhanced;

Therefore, Be It Resolved that the creation of such fund meets with the approval of this Association, and that no part of said moneys shall be expended except upon a vote of the majority of those present at an annual meeting, and in the presence of and with the unanimous consent of the present Trustees, namely: Wilfred Gibson, Victoria, B. C.; Ora L. Markham, Portland, Ore., and J. A. Zinn, Jr., Seattle, Wash.

Be It Further Resolved that the said Trustees, above named, designate the Seattle National Bank as the depository for said funds, and that no part of said funds shall be withdrawn except upon a voucher duly signed by the said three trustees.

The second was the passing of the resolution to support the Photographers' Association of California in their endeavor to secure the 1924 convention of the Photographers' Association of America for San Francisco. At our business meeting it was determined to omit our 1924 convention if the National came to San Francisco, and in case the National were not to be held in San Francisco, then to hold our 1924 convention in Portland, Ore.

The program given in Victoria exceeded all expectations. The total attendance at the Convention Hall was 200 professional photographers, most of whom brought their wives.

The Convention Hall was open to the public two nights, on one of which a twenty-piece band furnished entertainment. It was estimated over 3,000 people visited the exhibits and viewed the photographs.

The following were elected for the coming year, beginning November 1st, 1923:

J. A. Zinn, Jr., Seattle, Wash., President; John Vanderpant, New Westminister, B. C., Canada, Vice-President, and C. F. Richardson, Milwaukie, Ore., Secretary and Treasurer.

To the retiring President, Wilford Gibson, was presented a beautiful leather case with gold traveling clock; to Vice-President Ora L. Markham and Secretary-Treasurer J. A. Zinn, Jr., each a silver loving cup. All of these gifts were engraved: "In appreciation by and for the well-rendered services to the photographic profession during the year 1922-1923."

It was gratifying to see the happy faces and enthusiasm shown at this 1923 convention of ours. It is becoming more and more a factor in helping us enlarge our outlook and gather inspiration for the coming year.

J. A. ZINN, JR., Secretary.

PHOTOGRAPHERS OF THE PACIFIC COAST

Here is some good news for us, and shows the fair and square spirit of the Executive Board of the Photographers' Association of America.

Quoted from letter just received:

"I have just written Secretary Campbell asking him to announce to Californians that all memberships* sent to his office will be credited on your quota of five hundred. It might be well if you could mention that in your California news.

"Very truly,

"CLARENCE STEARNS,

"President."

* This refers to members who have been accustomed to forwarding their dues regularly to the P. A. of A.

OUR DELEGATES IN WASHINGTON, D. C., JULY, 1923

Reading from left to right: Harry H. Main, Laurence B. Morton, Miss Katheryn Gunnell (delegate of the Photographers' Association of the Pacific Northwest, who sent Miss Gunnell east with instructions to help bring the convention to San Francisco), P. Douglas Anderson, A. Putnam and H. Lancaster

Colonel E. H. Merrill and G. F. McCullagh should have been included in this picture, but were unable to be present

MEETING OF THE PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA

Held at Hotel Stewart, San Francisco, on Monday Night, September 17th, 1923

Toward the conclusion of the dinner, the President announced that the peaches on the table, which were of extraordinary size, were a gift from Mr. Sackrider of Marysville. "What you don't eat you may take along with you."

At the coffee stage of the repast the President announced that there was no fixed programme for the evening, and that it had been suggested by one of the members that each of those present should give a three-minute talk on some "kink" by which they had been able to save money, time or labor.

The usual roll-call was dispensed with. The Chairman drew attention to the presence at the table of Mr. Harold J. McCurry of Sacramento and Mr. Dassonville of San Francisco.

Miss Ida M. Reed, manager of Camera Craft Company, in reply to inquiry regarding Mr. Felloes' condition, announced that he had sat up for three hours on the previous day.

Mr. Anderson, in the absence of Mr. Felloes, read the minutes of the last meeting, which were approved as read.

The delegates, Miss Reed and Miss Dahl, who attended the Convention of the North-West Association, were asked to make a report, but Miss Reed asked that their report be laid over until the next meeting.

The Committee on Ethics was unable

to report in the absence of Mr. De Gaston, the chairman, but it was announced that that committee had met and had a full discussion.

The Chairman handed to the Acting Secretary a copy of the Code of Ethics of the National Association, which was read to the meeting by Mr. Anderson.

It was proposed by Mr. Morton, seconded by Mr. Lancaster, and RESOLVED: That this Association adopt the Code of Ethics of the National Association, and also apply to the National Association for a charter.

Miss Dahl presented the Schedule of Prices adopted by the North-West Convention for the use of Portrait Photographers, and announced that Messrs. Hirsch & Kaye had offered to copy it.

Mr. McCurry gave an elaborate description of his new studio building in Sacramento, and wound up his talk with the announcement that he would take five memberships right off as a start toward the quota of five hundred required to bring the 1924 Convention to San Francisco.

Mr. Morton gave a very clear and concise account of the terms and arrangements which had been made for the care of the membership subscriptions under all contingencies.

Mr. Ralph Young showed what a great benefit the Association had been to his business.

Mr. Dassonville described his method of dealing with the newspapers when they asked him for the portrait of any of his customers.

The Chairman announced that there would be a regular programme at the next meeting.

Mr. George E. Russell gave a very interesting description of the work and ethics of the aerial photographer, and was somewhat amusing in his use of the term "Bath-tub Photographer."

The Chairman announced that three weeks from this night would be the occasion of the annual meeting and election of officers to serve for the ensuing year, and named the following members as a nominating committee, namely: Mr. R. E. Scharz, chairman; Mrs. Holly Todd, Mr. Lancaster, Mr. Lothers, and Miss Dougan.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

The Box Brownie Camera

When any of your friends return from a trip, the desire to see what they have done in the photographic line is uppermost in your minds. After you look over the results you automatically begin selecting the best and then you start in to try and assist improving those and making them more attractive, either by trimming down or emphasizing a point here or there to make the whole hang together better.

Similar tactics prevail among the staff of Camera Craft and when our stenographer, Miss Evelyn Blackman, returned from her vacation in the Yosemite (one of the wonder places of California) we were all anxious to give her efforts the once over.

Two of her studies were selected and appear as illustrations for this article. They were all made with a Box Brownie Camera and show what can be done with a camera of this type, if we only use it intelligently.

Now let us consider the Brownie Camera and see what we can do with it. First of all we will examine the camera and see how it is constructed. By doing this we will understand it better and the knowledge thus obtained will help show us its limitations, what we can do well with it and what we had better leave alone. The camera is in the form of two boxes telescoped together, forming a light-tight compartment. The inner box has the film holder and also the lens. The lens itself

HALF DOME
Yosemite Valley
By EVELYN BLACKMAN

is generally a single Meniscus lens, set at such a distance from the film that objects from within a radius of from twelve feet on will be in focus. In other words, the camera belongs to what is known as the fixed or universal focus type. The largest opening or stop of the lens works at between U. S. 8 and 16, the shutter works at about 1/25 second and has also time adjustments.

By using a portrait attachment over the lens we can work as close as three and one-half feet to our subject. We know a doctor who uses a Box Brownie and Portrait attachment to make photographic records of his surgical cases. His results are uniformly good.

By using a camera of the fixed focus type we automatically limit ourselves to certain subjects that do not require selective focusing. Our illustrations are as you will admit very fine. We doubt very much if they could be improved even if made with another camera.

Landscape Subjects

We will say that our landscape consists of a foreground subject; that we desire to emphasize and make our strong point of interest. Could we do it with a fixed focus camera? Yes, we might, provided the lighting and atmospheric effect was just right and would automatically make our distance recede as we wished. But how much easier it would be if we could focus on our main point of interest, stop down just enough to get the depth of field we wanted and then make our exposure. Now we will take some other type of subject and see what we can do with it.

Portraits in the Open

If we exercise care in the selection of our background we can make our subjects stand out. We can handle our subject after the manner shown in the "Amateur and His Troubles" Section of our August, 1923, issue. It might mean a short time exposure, that would mean using a tripod or some other means for holding our camera, but I know you will agree that your results would be worth the effort. When making portraits with a Box Camera we should not work closer than say twelve feet to our subject, or else our subject will be slightly out of focus. If we want a larger figure it is better to depend on enlarging from our negative to get the size of figure we want.

You can also make seascapes where selective focusing is not necessary. There are countless subjects that can be photographed with the box type of camera and photographed well. If owners of box cameras will take along with them either a tripod or one of the handy attachments that takes its place, they can make studies in the shade, woodland scenes, or any subjects that require a short exposure. Here is a simple method of photographing waterfalls or moving water, that owing to the dark trees and foliage surrounding them require a short time exposure. You know that if you give a short time exposure your moving water will print as a blurred mass, no detail whatsoever showing. But what is to prevent your giving an intermittent exposure, nothing at all. To give an intermittent exposure proceed as follows: We will say that our subject with the stop we are using requires 1/5 second exposure to render detail in the shadows. We place our camera on the tripod and set our shutter for instantaneous exposure, which is, as I said before, approximately one-twenty-fifth second on our Brownie camera. We snap our shutter five times. Five twenty-fifths equal 1/5 second. Now what has happened—we have given our full exposure and yet we have stopped the motion of the water. True, we have five successive exposures on top of each other, but we have gained what we wanted, our shadows are fully exposed and yet we have detail in our water. This method of exposing works equally as well with the roll film folding camera, equipped with an automatic shutter.

I have only told you about a few things you can do with a box camera. A very good way to learn the possibilities of your camera is to expose several rolls on experimental work, keeping a record of what you do and how you do it and then study your results. Your practical experiences along these lines will prove a very valuable teacher.

Now for a few words about the illustrations themselves. Half Dome was made with a 2C Box Brownie Camera. The ex-

THE PATHFINDERS, YOSEMITE VALLEY
By EVELYN BLACKMAN

posure, taken at 1:30 P. M., was instantaneous with No. 1, or largest stop. The Eastman Film was tank developed in pyro and the negative enlarged on P. M. C. Bromide. "The Pathfinders" was taken at 10 A. M. and received the same exposure as Half Dome, but only part of the negative was enlarged. "The Pathfinders" is a picture of horses taken in motion and it brings home to us what can be done with a slow shutter exposure, provided we exercise judgment as to the direction our subjects are moving. The shutter in this case was just a trifle slow to stop complete motion, the horses' feet being slightly blurred, but to me this is rather pleasing than otherwise, for the very reason that it suggests motion as does also the dust raised by the horses.

A COPYING STUNT

When copying a photograph or any paper which will not be affected by being wet, a much better result can be obtained by thoroughly soaking the picture in water, squeegeeing it to a piece of smooth cardboard, which in turn is fastened to the copy-board, than by using thumb tacks or the spring-fingers, due to the fact that the wet picture hugs its support and will not buckle or show creases. The exposure must be made while the picture is still quite damp and before it starts to leave its support.—Contributed by R. L. McColm,—Asbury Park, N. J.

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Bromide-Chloride Wet-Collodion

Some time ago at the Royal Photographic Society Mr. W. T. Wilkinson read a Paper describing the advantages of a variation of the wet-collodion process, in which the iodide in the collodion is replaced by a mixture of bromide and chloride. We print below the chief part of this communication, and are able to supplement it by some further practical notes on the process which Mr. Wilkinson has written.

The wet-collodion process requires great skill and care to keep it going, but sooner or later silver iodide will give trouble. In making up a new silver bath it must be saturated with silver iodide. Saturation is only another word for instability; a slight change in temperature will upset the equilibrium, and pinholes and other troubles ensue.

Again, iodine in contact with ether forms organic compounds, possibly aldehyde, and acetic acid, reducing silver nitrate to a metallic state, the silver bath to a state of chaos, and the operator to profanity, and so far as I am personally concerned the method of Scott Archer and Hardwich is dead.

Now, instead of collodion, in which the principal ingredient is an iodide, a bromide is substituted; I say the principal ingredient because neither an iodide, nor a bromide, used alone will give a negative free from fog, and I wanted to entirely banish the use of silver iodide; I mix with the bromide a chloride. This formula has done good work.

Dissolve

Ammonium bromide.....	240 grs.
Calcium chloride	90 grs.
Industrial spirit	8 ozs.

When dissolved, filter, then add

Methylated ether, .725.... 12 ozs.

and add this to 60 ozs. of Johnson's or Penrose's plain collodion, and allow at least a fortnight to ripen.

Sensitise in 60 grs. of silver nitrate to each ounce of water. Silver bromide or chloride not being soluble in a solution of silver nitrate, no saturation is required.

Plates coated with this collodion and sensitised in the plain silver bath may be manipulated exactly as one of the old wet-collodion plates would be, i. e., after exposure in the camera develop the image with an iron developer, and finish it off in the good old way; or wash out all the free silver nitrate, expose whilst still wet, then develop with hydroquinone or any other alkaline developer.

This method is extremely useful when long exposures are required such as making 250 step-and-repeat exposures upon a plate 36 ins. by 24 ins., avoiding any corroding of the edges of film caused by the presence of free silver nitrate.

Again, with this collodion, if the washed plates are coated with an organifier, such as any of the old well-known preservatives, gum gallic, gin, whiskey, coffee or beer (although I have grave doubts about post-war stuff), and then dried, these plates can be made color sensitive by using the dyes sent out by the Ilford Co.

Thus plates may be made capable of physical development, or alkaline development, color blind or color sensitive.

All the old bath troubles are banished and collodion is elevated into a certain and thoroughly practical process.

In reply to other questions Mr. Wilkinson said that if a collodion salted with a bromide only were used it was very seldom that a negative could be obtained free from fog. If, on the other hand, the iodide or chloride were mixed with it, an image free from fog was obtained. A very good proportion was four parts of bromide to one of chloride in the collodion. Color sensi-

tizing could be done by bathing the plates in exactly the way recommended in the Ilford booklet for the bathing of gelatine plates.

If it was desired to make micro-photographs—that is to say, small photographs made from large—it was advisable to make a 5 per cent. solution of collodion and then pour it into water, wash it well with water, press it between clean cotton or linen and spread it out to dry. It would then give a very fine grain indeed. For these very tiny micro-photographs, however, there was nothing better than the old albumen process. It was slow, although with electric light one could get a good exposure in about 30 seconds. The collodion method was a much quicker process, and the resulting grain was nearly as fine.

The bromised collodion had just a little over double the speed of the ordinary iodized collodion, and it was also quicker as a dry plate. For alkaline development the sensitized plate was drained, soaked in two or more changes of clean water for about five minutes, rocking the dish occasionally, rinsed under the tap and drained. It might then be put into the dark-slide, the exposure being a little less than for an ordinary wet plate. In the dark-room it could then be developed with any of the alkaline developers. If it was desired to dry it before exposure, one flooded it with a preservative, stood it up to dry in the dark-room, and then treated it just as an ordinary dry plate. If a line subject, the development was with hydroquinone, but if a continuous toned subject, development could be with amidol or any other developer, just as in the case of a gelatine dry plate.

The old wet-collodion process is still the sheet anchor of process engravers, and during its reign of seventy years has undergone little alteration from the original formula of Scott Archer and of Professor Hardwich, and this in spite of the heart-breaking vagaries of the silver bath, which have had untold pages of literature devoted to them.

As long ago as the sixties of last century M. Carey Lea and Thomas Sutton tried to rouse enthusiasm for a collodion containing bromide, instead of a mixture of iodide and a bromide, but a collodion containing one salt (be it bromide or iodide) will not work, and photographers got the impression that a silver bromide film was not amenable to development by physical or acid solutions. Then Messrs. Bolton and Sayce introduced their collodion-emulsion process, a process that was successful right from the beginning. Consequently all progress with a method entailing the use of a silver bath was stopped, and when in course of time gelatine dry plates came into being wet-collodion, with its many inconveniences was shelved entirely by the photographic world. When its second incarnation took place, with the inception of photo-engraving, the process men had too much to learn in regard to etching, screen negative making, etc., to bother about improving a process which was to them quite satisfactory, the bath troubles being got over by the sensible and business-like procedure of having plenty and to spare of silver bath, so that if one lot struck work another was ready to take its place.

Just before the war I came across one of Mr. Sutton's articles, and made up some collodion with cadmium bromide, another lot with ammonium bromide, and both lots were given a fortnight to ripen, but, try as I would, I could not get a clean negative, even with an 80-grain silver bath, and that very acid.

Calcium chloride was then mixed with the collodion and the first plate developed with an iron developer was quite a success. When the war came I switched off into ordinary portrait photography, and until 1920 was unable to make experiments of any kind. Since then I have given considerable time to studying and experimenting with bromised collodion, and can now safely say that, given an intelligent operator, without prejudice against new fangled ideas, the old wet-collodion is quite dead.

Bromo-chlorized collodion procedure has many advantages. First of all the silver bath is just a solution of silver nitrate in

water, 70 or 80 grains to the ounce. Just made acid with nitric acid it is at once ready for use, and no matter how the atmospheric temperature varies, the bath works uniformly and well until at last the time of sensitizing gets longer and development lags, occasioned by lack of silver nitrate. Then add with more silver nitrate, and everything is all right once again.

The bromo-chlorized film, after exposure in the camera, may have the image developed, fixed, copper-intensified, cut, and intensified exactly as is the practice in the old wet-collodion process. If the silver bath be kept up to strength the camera exposure is shorter and the density of dots, etc., greater.

When long exposures are needed, as in step-and-repeat machines, it is advisable to wash the sensitive plate in clean water until all free silver nitrate is got rid of. Then drain, and expose (no loss of sensitiveness need be feared), and develop with an alkaline developer. The image flashes out at once, and full density is attained in from 30 to 60 seconds, wash and fix in cyanide or hypo, again wash, flood with iodide of potassium and iodine and cut with cyanide, etc., as usual.

The washed sensitive plate may be converted into a dry plate by flooding with gum-gallic preservative, drained and dried.

Thus with bromo-chlorized collodion it is possible to develop and finish the negative just in the old wet-collodion way, or wash out the free silver nitrate, expose wet, develop with an alkaline developer (say, hydroquinone for a line subject, pyro-soda for continuous tone), and then finish in the same way, or after washing away the silver nitrate apply a preservative, dry the plate, and you have a dry collodion. By these methods color-blind plates would result, but by bathing in certain dyes, before applying the preservative, the dry plate can be made color-sensitive.—W. T. WILKINSON.—B. J. of Photography.

Some Causes of Failure in Autochrome Work

The Autochrome process is, I think, rightly regarded as among the simplest of the present-day methods of producing photographs in natural colors, and though the manufacturers of the Autochrome plate give specific and minute directions for their manipulation, many photographers, even after a fairly lengthy experience, do not obtain results as good as the process is capable of giving. Hence some notes on causes of possible failures may perhaps be of use to many workers, who may not have obtained strikingly beautiful results.

One of the most prolific causes of failure in securing Autochrome transparencies pleasing as regards brilliancy and rendering of color can be traced to the fact that many exposures are made under dull lighting conditions. The light in this country, even at its brightest, is none too good for color photography. Under dull lighting conditions, while the plate may render the colors up to a certain degree, the visual brightness that we associate with the subject is lacking: the transparency looks dull and spiritless. It is not generally realized by those who have not had a grounding in the scientific principles of color that the brilliance of the coloring in any object depends almost entirely upon the strength of the light illuminating it. If, for example, we examine a deeply-colored orange in a shadowed corner of a room, we shall be sensitive of its color in only a slight degree. If we take the same orange to a more brilliantly lit part of the room near a window we shall be impressed by its color still more; while if we take the same orange into bright sunlight its coloring will be more brilliant still. I would go so far as to say that the orange when examined in the dark corner of the room looked almost colorless, and probably the impression as to its color was a mental rather than a visual one. The color of the orange was known, and this fact influenced to a great extent the idea formed of its intensity of coloring. By way of emphasizing this point still further, if the orange is placed upon a table near a window, the light coming from one main direction, it will readily be observed that the color is more intense where the light is strongest, while on the extreme shadow there is little or no color visible. It is there, of course, but the light has not brought it out. Now a color photograph taken of this orange would be unsatisfactory. There would be a small area

of color upon the orange, the rest being in shadow, and, reflecting no colored light-rays, would be seemingly inaccurate. The picture would be accurate, but as a color photograph distinctly unpleasing. If the Autochrome worker can only grasp this point fully at the outset, he will go far to avoid one of the most prolific sources of failure. I do not mean to infer that it is not possible to make quite good Autochromes under dull lighting conditions, but rather that the best results are certainly only to be obtained under the most brilliant lightings. We are so used to thinking of the brilliance of the colors when viewed under sunlight that we do not fully realize what a great difference an absence of sunlight really makes.

Further, it seems that the very weak light-rays emanating from shadow detail cannot pass through the screen of an Autochrome plate unless a very full exposure can be given, a fact contributing towards lack of color in the deep shadows. In this respect the average Autochrome rendering of a sunset is often disappointing. There is a central spot of color in an area of black shadow, which, though satisfactory from the scientific point of view, fails to please as a picture. I would most strongly emphasize that all exposures should, as far as possible, be made out of doors, even when taking Autochromes of flower, fruit and still-life studies, for, unlike monochrome work, where we need shadow and tone, the Autochrome needs color, and the strongest possible even lighting is required to bring this out and avoid contrasts.

The question of exposure, where so many workers go wrong, is best settled by a careful calculation with an actinometer that makes an actual test of the light, the indicated exposure being very accurately timed. Ten per cent. of the time may be added with advantage if the light is dull or with a view to allowing for any slight lessening of the speed of the plate after its manufacture. Many Autochrome transparencies that I have seen bear abundant evidence of the fact that the question of the exact exposure has not had the amount of attention necessary.

As regards dark-room manipulation, the safe-light recommended by the makers should always be used; and this requires to be most carefully employed if it is not to affect the color of the Autochrome plate. I have seen many Autochromes possessing a greenish blue tint that has very obviously resulted from too close an inspection by the Virida light. This should be kept at least 4 feet from the plate, the latter always being shielded from direct rays.

I recommend that whenever the exposure is known to be correct the plates should be developed in a tank by a reliable time and temperature system. This will produce far better results as a general rule than the old method of judging the progress of development by inspection. In fact, even after a considerable experience this is no easy matter, and incorrect development may be regarded as a very prolific cause of failures, even when the exposure was correct. Using the highly concentrated solutions recommended for Autochrome plates, the image appears very rapidly, and the plate quickly begins to blacken over. Owing to this fact and the necessarily weak dark-room light, the degree that development has progressed is not easy to judge. Even if tank development is not adopted, the time and temperature system should be employed. The chief danger is under-development in the first bath. If this happens, the first image, being weak, leaves too much unreduced silver after reversal, with the result that after the second development the Autochrome is dull, opaque and lacking in brilliancy of color.

Trouble sometimes arises from a lack of understanding upon the part of the photographer that an Autochrome film is far more delicate than an ordinary dry plate, and will not stand rough washing; prolonged immersion, in solutions, or solutions of abnormal strength, handling with hot fingers, etc., without risk of mechanical damage. The film must not be touched while wet with the fingers. If proper cleanliness of solutions, dishes, etc., is observed there should be no need for this.

An otherwise good Autochrome may be spoiled through needed after-treatment being postponed until the plate has dried. If an Autochrome transparency, after the second development, is found to need in-

tensification or reduction, this should be proceeded with at once, for if the plate has once been dried re-wetting is almost certain to produce green spots, if not worse. After-treatment which involves prolonged immersion of the transparency is to be avoided if possible, but my own experience has been that if strict cleanliness is observed, the plate handled as little as possible, and immersed for as short a time as is consistent with the effective action of any solution at normal strength, few failures will occur.

Finally, some Autochrome transparencies, after coming from the second development, are of an unpleasing brownish tint which detracts from the beauty of the coloring. If this is found to be present the reversing bath may be diluted to about one in forty, and the Autochrome, after well washing, immersed in this bath. Great care must be taken not to leave the plate in the solution too long; half a minute at the outside is sufficient to clear the image; longer action may greatly reduce the image. Though not generally regarded as essential, most Autochromes, are the better for the clearing bath, especially if the colors are inclined to be dull. The plate should be washed for about four minutes afterwards.

At the present time most of the early difficulties have been satisfactorily overcome, and the production of perfect color pictures is a certain and simple matter. The makers point out that owing to the extreme delicacy black spots do sometimes appear in the emulsion, but in my own case it is rare to find them, and as a general rule if a plate gives an unsatisfactory result the worker himself is usually to blame.

ROBERT M. FANSTONE,
B. J. of Photography.

Art and the Crafts

A Department Devoted to the Encouragement of a Closer Relationship Between Photography and the Fine Arts

What is Pictorialism?

A protracted correspondence in the British Journal of Photography between the well-known photographer Mr. Frederick H. Evans and Mr. Tilney, the artist, has once more brought into view this not unimportant question. A letter by Mr. Drinkwater Butt contains passages that seem to me so true that I take the opportunity of quoting them in this department for the benefit of its readers:

Mr. Butt says: "I would suggest that pictorialism is the result of the effort of a properly qualified person to represent natural or artificial objects in such a manner as to produce in the mind of the spectator of his work the same ideas, emotions, sentiments and pleasures that they produced upon his own. By a properly qualified person in this connection I mean someone who, to an inborn love of nature and human nature in their many manifestations, has added a particular study of that one which is commonly called art, and who has acquired also a certain amount of technical ability in some one or more of the many methods and processes of artistic expression. The first part of the last sentence may possibly be interpreted as meaning merely that the artist is born and not made, so I would like to modify that only partially true aphorism by adding that I think artistic perception may also be cultivated to a certain extent, in most intelligent persons; more especially by the practice of the two other suggestions. But not all artists, not even Mr. Evans or Mr. Tilney, can always and at all times communicate their emotions to the spectator of their works (for instance, Mr. Evans can apparently not do so to Mr. Tilney) but in proportion to the success of each one in so doing and in proportion also to the nobility of the ideas he can interpret, so will his position as an artist be finally estimated. Everyone who

goes about the world with his eyes open comes upon some object, incident, scene or effect which by its magic strangeness or suddenly apprehended duty, gives a most stimulating blow to his consciousness, and arouses in him afresh that sense of wonder and admiration which is almost akin to religious emotion; and it is the person who can give this a permanent form and communicate the impression to others, who is the real artist and producer of real pictures. To do this, he must, of course, be thoroughly acquainted with the use of the tools of his craft, the possibilities of his medium and the technical devices of selection, composition, pattern, chiaroscuro and perspective, which are to him what harmony is to a musician, proportion to the architect, or prosody to the writer. But as long as the result is thus interesting or beautiful, it is no matter what medium or process is employed, or manner of presentation used—it may be oil or water-color, black and white, the etching needle and copper plate, or the lens and a sensitive plate. It may be the august creation of a Michael Angelo or a Raphael; the masterly impressionism of a Turner or a Whistler; the broad statement of a Sargent or late Millais; or the minute realism of a Dutch master. It may be pronounced "fuzzy type" or a sharp photograph; a straight print or the "controlled" production of a bromolist, or, again, "gum splodger"; but if it has something to say and says it clearly, or some beauty to reveal and presents it beautifully, it is a work of art and a picture in the true sense of the word. I may even add (though this will probably sound an awful heresy to some of the ultra moderns) that a picture may at times be permitted to tell a story, provided always, as the lawyers say, that it does not descend to mere anecdotage, or to that level where the theatrical woos the sartorial, and their offspring is the furniture picture."

The above statement is one of the most comprehensive that I have found in endless reading on a never-ending discussion. So far as principles are concerned, Mr. Drinkwater Butt has exhausted the subject. The only thing I would wish to add on my own account is to say that so far as plate and lens are concerned in the production not only of pictures but of true representation of natural objects, control is in ninety per cent of cases a necessity, for no plate and no filler will ever adequately deal with a representation of color in black and white without some such exercise on the part of the photographer. It is not settled by pancromatic plates or filters, because the impression which nature makes upon the eye by tone alone, and the transcription of color and tone may be a fixed thing to a sensiometer but not to a man.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

California Camera Club

For the first time in the history of the Camera Club a vote of an actual audience assembled at Native Sons Hall was taken at the last monthly entertainment. The results, as announced by H. Syril Dusenbery, Chairman of the Exhibition Committee, are very interesting and leave no doubt as to just what that particular audience preferred. For the purpose of simplification the first and second choice votes have been combined.

Total Ballots Collected and counted	291
Moving Pictures, Travelogue	178
Moving Pictures, Natural History	94
Moving Pictures, Classic Stories	92
Moving Pictures, Industrial	66
Lectures with Lantern Slides	39

Other items on the ballot received only a few scattering votes.

The results for the item MUSIC were 146 in favor and 47 opposed. While less than half of those present voted, the results are believed to be representative.

Notes and Comment

Photographs Suited for Two-Color Covers Wanted

Photographs will replace oil paintings for some of the covers of INDUSTRIAL POWER during the coming year.

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The scenes must, of course, be industrial in some sense. They must possess high pictorial and artistic value. They must be suitable for two-color reproduction.

Address Industrial Power, 440 South Dearborn Street, Chicago, Illinois.

Examination for Photoengraver

The Civil Service Commission has announced that applications will be rated as received until further notice for the position of photoengraver in the Government Printing Office.

The rate of pay has been increased from 95 cents to $1 an hour, plus the bonus of $20 a month granted by Congress. Appointees are also allowed extra compensation for Sunday, holiday or night work.

Applicants for this position must have completed a four years' apprenticeship, and, in addition, have had at least one year's journeyman experience.

Full information and application blanks may be secured from the United States Civil Service Commission, Washington, D. C., or the secretary of the United States Civil Service Board, at the Post Office or Custom House in any city.

Advertising California

The Bank of the Manhattan Company, 40 Wall Street, New York City, is not afraid of advertising other attractions besides their own business. Here is what they are using:

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From the days of '49 California has been looked upon as a land of riches and plenty. She continues first in placer gold mining and her fruit crop is unequalled. Her combined agricultural, mineral, forest and manufacturing output is around **three billion dollars** annually. This includes many products in which the State ranks first and a host more in which she is prominent. Shipping and fishing are also sources of great wealth.

The Bank of the Manhattan Company was already fifty years old when the gold rush began. Since then it has been prominent in maintaining a valuable link between California's production and Easten markets through its metropolitan banking service.

Snapshot Craze in China

That camera carrying, snapshot taking "mania" so common among American nature lovers, "take a picture as you go" autoists and others on this side of the Pacific has evidently extended to our Oriental brothers in old Asia. Consular advices report the more general use of cameras in China and an amazing increase in the importations of photographic materials in the last decade. The United States enjoys no mean share in this increased trade, these advices state, and today, if Sing Lung Chang in Peking or "points east" wants to take a snapshot of the little Changs he would in all probability use a standard American camera.

Prior to the war, over one-third of photographic materials imported into China came from Great Britain, about one-third came from Japan, and the United States and sundry other nations had to scramble for their share of the remainder. Great Britain held her lead up to 1917, when she slipped backward. Japan climbed into first place and the United States participation increased threefold and made her a formidable competitor.

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Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St. Berkeley, Calif.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Stereoscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

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Southern Division, No. 3: Under the direction of Frank Reeves, Stamford, Texas, comprises Florida, Georgia, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, Louisiana, Arkansas, Oklahoma, Texas, New Mexico, and Arizona.

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5207—Rodolfo S. Pique, Box 5, Cardenas, Cuba.
Class 3.

5208—Wm. B. Kemp, Secty., 1365 Cass Ave., Room 227, Detroit, Mich.
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5210—G. Churchill Smith, R. F. D. 8, Bangor, Me.
Class 2.

5249—E. M. Dunbar, 15 Rowena St., Boston, 24 Mass.
I desire to exchange only nudes. Class 1.

CHANGES OF ADDRESS

3329—Geo. R. Bunn, 218 E. Avenue 60, Los Angeles, Calif.
(Was 3426 Walton Ave., L. A. Calif.)

3523—E. W. Lidaker, 1617 W. 59th Pl., Los Angeles, Calif.
(Was 1817 La Salle St., Los Angeles, Calif.)

4291—John R. Palmer, Avon, N. Y.
(Was Franklin, N. Y.)

4523—A. K. Mehl, Box 426, Fort Wayne, Ind.
(Was Nat'l. Mill Supply Co., Ft. Wayne, Ind.)

4712—John W. G. Winkler, U. S. Army, Fort Logan, Colo.
(Was Denver, Colo.)

4725—W. H. Dickinson, McDonald, Kansas.
(Was Fairfield, Iowa.)

4914—Samuel F. Lawrence, Accounting Dept., L. R. & N. Co., Shreveport, La.)
(Was 1754 Laurel St., Shreveport, La.)

5066—Lee Davis, c/o Pelican Bay Lumber Co., Camp 2, Klamath Falls, Ore.
(Was Sacramento, Calif.)

5197—E. H. Magee, 329 W. 83rd St., New York, N. Y.)
(Was 66 W. 134th St., N. Y.)

NEW MEMBERS

5284—Albert Peterson, Peru, Nebraska.
4x6 Artura of college students, school work, etc.; for photographs pertaining to above-mentioned subjects. Class 1.

5285—Mrs. E. Jocelyn, Burlington, Ont., Canada.
3¼x5½ Velox of scenery; for the same. Class 1.

5286—Irving Schaefer, C. M. Youmans Lumber Co., Darfur, Minn.
Any size of general subjects; for athletic sports, bathing beach scenes and anything of general interest. Class 1.

5287—Chiu Khoon Eow, Post Box 10, Medan, Deli, East Coast of Sumatra.
2½x4¼, Bromide of general subjects; for anything of interest. Class 1.

5288—N. J. Penning, 643 Elm St., Arlington, N. J.
9x12 cm. 2½x4¼ and 3¼x4¼ D. O. P., of historical, views of mountain, streams, monuments, Eastern city views; for historical, mountain scenery, views in Western cities. Class 1.

5289—L. E. Edmondson, 200 Charleston St., Mobile, Ala.
2¼x3¼, 3¼x5½, enlargements 8x10 and 10x12 Rexo, Azo, Eastman Bromide of local landscapes, general views, river scenes, etc., for similar subjects. Class 1.

5290—Louis Tucker, 23 Sackville St., Port of Spain, Trinidad, B. W. I.
6½x4¾, 5x7 and 6½x8½ Azo (glossy and matt), Artura and C. Black. General views of Trinidad, native types, photographs of buildings, landscapes and other things; for photographic studies, home portraits, flashlight photos and nudes. All letters of inquiry promptly answered. Class 1.

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CUTTING ODD SIZE PLATES

In cutting odd-size plates from standard plates the work can be facilitated by cutting a hardwood pattern or template as a guide for the glass cutter. Cut your template from half-inch wood, one-sixteenth of an inch smaller than the desired size. The glass-cutter (a ten-cent one is best) does not cut close to the pattern, hence the smaller size, and the thickness of the pattern acts as a much better guide than a ruler, besides eliminating the constant measuring.

Always make your cutter-mark on back of plate, then break by placing plate on edge of shelf with the angle of shelf running along the cutter-mark, taking care to have the face of plate down or against shelf edge. Give a sharp bend downward and you will find that your plates break clean. Never tap the plate in the effort to have the cutter-mark crack through, as this results in many broken plates.

When plate breaks, the emulsion holds the pieces together hinge fashion. Bending the plate back and forth will break this emulsion clean. Do not twist the pieces apart nor try to tear them, as this invariably results in the emulsion being stripped from the glass.

Much economy can be effected by choosing the proper size of standard plate to cut from. For instance, in cutting 2¼x3¼ plates, two can be cut from a 4x5 plate, but four can be cut from a 5x7 plate. In the long run it is cheaper to buy large-size plates if they will cut to better advantage.—Contributed by R. L. McColm, Asbury Park, N. J.

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CONTENTS FOR NOVEMBER 1923

Cover Design—"While Trade Winds are a Blowing" (Oahu, T. H.) ....By W. R. Potter
In Old Santa Barbara (Frontispiece) .... By Samuel Adelstein
Aero Photography ....By George E. Russell 507
Forthcoming Exhibitions, 1924 513
Greeting Cards ....By P. Douglas Anderson, Ralph Young, Edna R. Gordon and J. Lee Stocking 514
Enlarging Papers ....By Sigismund Blumann 519
II Orthochromatic Photography ....By H. J. Devine 524
The Emporium (Third Annual) Photographic Exhibition By Leandro N. Lewis, Jr. 527
Our Frontispiece ....By E. F. 534
II Finding Forgeries and Forgers by Fotografy ....By Chauncey M'Govern 535
The Eclipse ....By George L. Eddy 538
Editorial 540
Associations as Business Builders.
Photographers' Association of America 541
For the Professional 542
Meeting of the Photographers' Association of California.
Eastman School of Professional Photography.
The Amateur and His Troubles 548
Printing Papers, etc.
Salons and Exhibitions 550
Club News and Notes 553
Notes and Comment 553
Our Book Shelves 555

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IN OLD SANTA BARBARA

By SAMUEL ADELSTEIN

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
EDGAR FELLOES, Associate Editor
P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX NOVEMBER 1923 No. 11

Aero Photography

By George E. Russell, San Francisco

With Illustrations by the Author

Of the many scientific developments hastened by the World War, one of the most interesting and astounding is the development and perfection of aircraft and its application to photography. In its infancy and used solely as a novelty prior to 1914 Aero-Photography is today of unlimited use to many professions especially to the realtors, builders, engineers, planners and attorneys.

It is doubtful if there were as many as a dozen Aero-Photographs in existence up to 1914, excepting those taken from captive balloons and kites, whereas today there is hardly a city of any size or importance that has not been photographed from the air or that does not have it in contemplation. And the Aero-Photo-Map is the ultimate of Aero-Photography.

Shortly after the stalemate that followed the first battle of the Marne, the Germans began employing airplanes for observation purposes. Flights were made at comparatively low altitudes and the observer was able to gather a vast amount of information despite the rapidity of the flight. However, he was often wrong as to the exact location and many important details were overlooked. This, connected with the higher flying made necessary by the developments of anti-aircraft guns, turned the observers to the use of the camera and the development of Aero-Photography followed.

The importance of this form of reconnaisance was immediately recognized by the Allies and was fairly well advanced by the time we entered the war in 1917. Schools were established at several points throughout the United States for the training of photographers for this new phase of their work. The two most prominent were the U. S. A. School of Aerial Photographic Reconnaisance at Langley Field, Va. and the U. S. A. School of Aerial Photography at Kodak Park, Rochester, N. Y.

GOLDEN GATE PARK
San Francisco

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By G. E. RUSSELL

The writer had first become interested in Aerial photographing through Mr. C. L. Huntington, now a prominent commercial photographer of Oakland, California, whom I had met in various parts of the Northwest during 1911. Mr. Huntington had designed a special kite for carrying a camera and by very skillful handling was getting remarkable results. At that time I "got the Aerial Bug" but my experiences with a kite were not very successful. A year later Brookins and Ely were giving Aerial exhibitions in that section of the country and I tried to arrange to fly with them, but between weather conditions and train connections I arrived in Boise, Idaho, just too late to get my flight. The next Spring I made arrangements to fly with Christopherson at Ontario, Oregon, but for some reason he was unable to get his plane off the ground and we very nearly crashed into a fence. In 1914 I was on a newspaper assignment in the Eastern part of Oregon and while at Cornucopia, a mining town about 70 miles from Baker, I managed to get permission to ride over their cable tram from the mill to the mine. This was at that time the longest single span cable in the world, being nearly half a mile between the mill and the first tower, at places it passed over the gulch at an elevation of about 500 feet and after the first tower turned upward at a considerable angle and passed

STATE CAPITOL
Sacramento, California

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By G. E. RUSSELL

over very rough granite formation. I was greatly enthused at the opportunity but must confess that when I got safely seated in the carrier and started on the journey, I began to feel a little creepy and the creepiness was not lessened any when they stopped the cable with me out about 100 feet from the mill and a like distance from the tree tops. In fact I began to wish that "I was home and Dad was there" after a few moments, during which time I balanced that carrier better than any vaudeville artist could have balanced a chair on two legs. I finally got up nerve enough to focus my Graflex on a point on the opposite hillside (I was not looking back at the mill or any other way that might disturb my balance) and held the camera up over the side and shot. They held me there what seemed an age to me, but in reality only ten minutes, and then started me on my way again only to stop me again, this time about midway between the mill and the first tower and some 500 feet above the trees. I hadn't lost my balance as yet and very carefully took another pot shot over the side. After another endless wait I again started on my journey and was stopped on the highest part of the incline cable and directly over the roughest, sharpest looking granite needles I have ever seen. This time I paid particular attention to my balancing feat and did not attempt any photography

whatsoever. I finally arrived at the mine nearly an hour after leaving the mill. During all this "flight" I had kept my eyes straight ahead but after getting a firm platform under me I looked down over this cable at the mill and here on, not in, the next carrier, standing with one foot on the edge of the bucket and with one arm wrapped about the connecting strands, was another passenger. He later told me that he had thoroughly enjoyed the trip or rather my balancing act, that he made the trip several times a week and that I broke the monotony of it. He added that it was one trip that would always remain in his memory, and I assured him that he didn't have a thing on me, that I would never forget it.

I watched several buckets of ore go down before getting up courage to attempt the return trip and I believe that had not the mine been snowed in and no other way of reaching the valley again, I would have passed it up, but it was not nearly as bad as it looked and while I didn't take any pictures on the way down, yet I did sort of enjoy the trip.

On my return to Baker, where I had a commercial shop at the time, I found that there was to be an airplane there over the fourth and again tried to arrange a flight, but was again disappointed due to the pilot having a crash a few days before the big day. The next year, 1915, I was more successful and got my first "hop" in a plane. I was very much surprised to find that there was no sensation of speed nor dizziness and it seemed very safe until he nosed the plane down to land, I did get a thrill or a fright for an instant when he first turned it towards the ground. I made several exposures and at the time was very proud of the results I had obtained. I had something on each plate and disposed of a great number of them. Now I realize that they were bought as novelties, they certainly were not Aero-Photos. Oh, I nearly forgot to tell that while I wasn't making exposures I always had two big handfuls of airplane.

I was unable to promote any more flights until our Uncle Samuel got mixed up in the big fuss. I made applications for enlistment in the photographic branch of the Signal Corps and managed to get sent to the first school held at Rochester. The E. K. Company had donated an entire floor in their new paper mill to the Army for the school and had also loaned their ablest men for instructors, including, I believe most of the photographic authorities of this country, but aerial photography was so new to all that even with these advantages it was necessary to do an enormous amount of research work. The school at Langley Field had been operating for sometime under the able direction of Captain M. A. McKinney and most of the practical experiments were carried on at that field. The school at Rochester was under the direction of the late Capt. Fred R. Place and in addition to the instructors furnished by the E. K. Co. the French and British governments had sent over a number of officers and men to assist in the instruction and give whatever advice their experience at the front had taught them. After completing the first course at the Rochester School, about forty students, including myself, were selected to replace most of the civilian instructors.

SAUSALITO, CALIFORNIA
Tamalpais in the Distance

Copyrighted 1922
By G. E. RUSSELL

After five months of instructing at Rochester, I was transferred to Langley Field, where I was at first assigned to a section for overseas duty but put to instructing again and later placed in charge of instruction and on duty in experimental work, which assignments I held till the armistice was signed. While doing the experimental work I had lots of flying and became so interested in the new angle of photography that I decided to remain in the Army for a time to gain more experience and stayed at the school, with various assignments to other fields on special duty. I continued in charge of instruction and experimental work until October, 1919, and was on different assignments at Langley till June, 1920, at which time I transferred to the Fifteenth Photo Section and came to Crissy Field, San Francisco. In October of that year, having completed my enlistment and seeing nothing further to gain by remaining in the service I went to Seattle intending to again engage in Commercial Photography with the air work as a side line, but found that working in the air had taken most of the interest and "kick" out of even press work, so accepted a position with the Durant Aircraft Corporation, which was shortly taken over by Major Reed M. Chambers and Captain Eddie Rickenbacher, and later by myself.

Aero-Photography is divided into two distinct types. Vertical or photos taken through the bottom of the plane and to all ordinary purposes a map of the area covered. It is possible to assemble a number of such vertical pictures, if properly exposed and enlarged and corrected to a given scale, into a large mosaic map. Such maps are being used extensively now, especially by city planners and large engineers. However, Aero-Photo-Maps are a subject by themselves. The other branch or Oblique photos are just what the term applies, photos taken at an angle and generally over the side of the plane. They differ in no way from any other picture taken from an elevated position, with the exception that the exposure is controlled by the vibrations of the propeller and must be made "right now" because when a pilot gets the plane in the proper position for his photographer he is not able to stop. If the photographer is not on the job he misses his chance. But there is a great advantage to making obliques from the air. It is possible to get just the desired elevation, and very nearly the exact location so that any one who is really a photographer and takes an interest in putting composition into his work, should be able to get good results—providing he has been in the air enough so he can forget that he isn't on the ground and have nothing on his mind but the making of that certain subject from the best location, the proper elevation, and to bring the picture out to its best advantage.

In the short time that Aero-Photography has been used commercially it has gone far past the novelty stage and in order to deliver the work now, it is just as necessary to put composition into the picture as it is in any other line of photography. I frankly believe that nearly every rule of commercial photography applies to aerial work excepting that the exposure must necessarily be very short. This is not caused as much because of the speed of the plane as because of the vibration of air caused by the propeller. Personally I nearly always use a long focus lense as most objects in the photograph are at quite a distance which allows of a considerable longer exposure. For the same reason I try to make the exposure either shooting forward or backward and never at right angle if I can help it. The co-operation of an experienced pilot has much to do with successful Aero-Photos, and I try to work with one pilot at all times.

I have found that in photographing from the air in and around San Francisco, it is not practical to use filters. Should I use a filter deep enough to cut through the haze it would lengthen the exposure to such an extent that neither motion nor vibration would be eliminated, rather I rely on a fairly decent day and always carry at least three different grades of plates. I select them much as one would in photographing any object on the ground. Polychrome and Ortho-non are my main standbys but sometimes because of light conditions I am forced to use faster plates and in a few cases find that I need a Panchromatic in order to get a relative color value. In developing aerials as in any other sort of photography, I seldom modify the developing formula published for that certain brand of plates, firmly

GROVE TERMINAL
San Francisco

Copyrighted 1922
By G. E. RUSSELL

believing that the Photographic Chemist who devised the formula for that plate, knowing the exact composition of the emulsion, is capable to say what combination of chemicals will give the best results. I have never had a pet universal formula.

Aero-Photography is still a baby in the commercial field and there is yet room for many improvements both in equipment and methods of operating, but to the photographer who can forget he is in the air and work as he would on the ground, there should be very little trouble.

FORTHCOMING EXHIBITIONS, 1924

January 4th to 31st, 1924—The Photographic Exhibition of the Portland Society of Art, Portland, Maine. Last day for entries, December 15th, 1923. Particulars from the Secretary, O. P. T. Wish, L. D. M. Sweat Memorial Art Museum, Portland, Maine.

March, 1924--Pittsburgh Salon. Entries close early in March. Particulars from P. F. Squier, 237 Avenue B., Westinghouse Plan, East Pittsburgh, Pa.

Greeting Cards

By P. Douglas Anderson, Ralph Young, Edna R. Gordon and J. Lee Stocking

Illustrated by the Various Makers

Christmas, the time of giving and receiving, the time when our thoughts go back home will soon be here. What is more appropriate for a photographer to do than make his own greeting cards. They will have a personal touch that no card bought in a store could ever possess.

Christmas is not the only time you can send cards. Easter is another time, the arrival of a little stranger in the home is another occasion, and so on.

We, of **Camera Craft,** are very happy to reproduce several different designs and ways of executing them by different workers. It is possible that some of our readers have made cards along the lines described, but there will be others who have never made cards so far and it is our purpose to try and assist them.

You are not limited to any type of picture. The one that serves best to convey your message is the one to use. It might be a landscape, a seascape, street scene, or a scene around your home.

Nearly all of our illustrations were made by artificial light, either electric or flashlight and different camera equipments used.

We are presenting a few personally made cards by Ralph Young, San Francisco, Miss Edna R. Gordon, Yonkers, N. Y. and J. Lee Stocking, Akron, Ohio. They will tell you how and you see the results in the illustrations shown.

Ralph Young says:

"When our little one was still asleep in its cocoon I started thinking about an announcement. I had never seen a photographic birth announcement but I thought that surely a photographer could smash traditions (you probably remember the old saying that a tailor always wears shabby clothes) and I decided to use my own craft to announce the "first born."

"It was rather hard to conceive a picture that was not stereotyped and yet would tell at a glance its little story. Finally the idea of a crowded clothes line came to mind—this seemed to me expressive of a baby and a typical sight in every household boasting a new addition. The next step was its execution. Wanting to concentrate all of the attenion on the tiny garments and to accent their daintiness and also to get a touch of unreality (a snap shot of a clothes line in a backyard would not be very interesting—too much reality) I placed the line with little garments against a black background in the studio and used back lighting.

"3½ by 4¾ prints on a dead matte paper were used. These were tipped onto a folder of rough white stock. An attempt was also made in the wording to avoid the conventional feeling of the ordinary announcement.

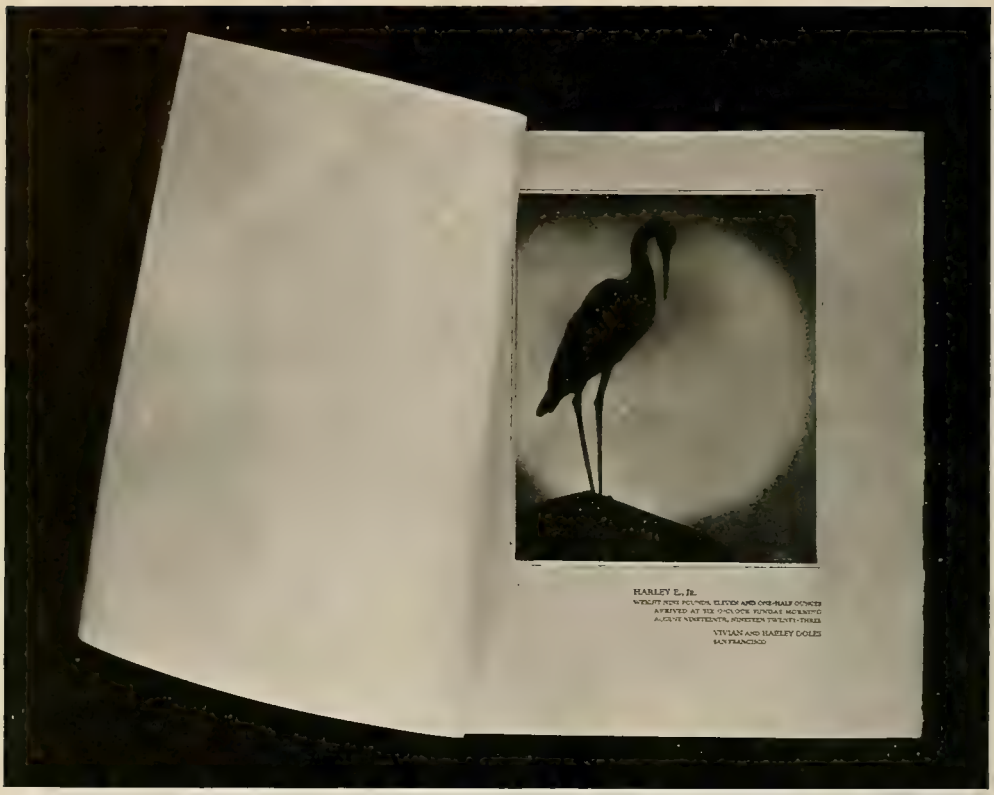
Noel Blanchard Young
arrived early Christmas morning
He weighed six pounds
& eleven ounces

GLADYS & RALPH YOUNG
SAN FRANCISCO

HIS OWN ANNOUNCEMENT. By Ralph Young

"A few months later a friend wanted one made. It occurred to me that old hardworking friend stork should really be given credit for his labors. It took a two day search among the shops to find a properly executed statue of his royal highness. Finally one was discovered with a good outline but poor modeling—this was really not a disadvantage because it gave an excuse to try something interesting with his shadow. He was placed upon the corner of a square piano bench which was tipped up; when this shadow was projected onto a screen the effect of a stork resting on a house top after his long flight was secured.

"The stork statue and bench were placed a little to the left of the camera and a single spot light placed at a considerable distance behind the objects so that a sharp shadow was thrown onto a gray painted screen. In order to help the composition and to get greater depth in the picture the round reflection of the spot light was allowed to appear on the background.



HIS FRIEND'S ANNOUNCEMENT By Ralph Young

"The same stock in paper was used as in my own announcement, but a different arrangement of type.

"A little advice to the prospective maker of a birth announcement—a considerable amount of time is necessary to conceive and work out an idea, make the prints, select the stock, etc., so start early, have everything ready but the printing which only takes a day or two and the announcements can be mailed out the first few days of the "little one's" existence."

Miss Edna R. Gordon says:

"In re-reading Mr. Felloes' article on Table Top Photography in the May, 1923 number, I thought I would write and send you some specimens of my work in this line.

"I am enclosing two Christmas greeting cards, (see reproductions) which were made as follows:

"The two little dancing couples are little paste-board dolls which are made to dance on a phonograph, the motive power being supplied by the revolving phonograph record. The miniature phonograph is about the size of a salt cellar, and these three objects—the couples and the phonograph—I arranged on the dining room table at night, the light being furnished by

YOURS FOR A MERRY TIME! By Edna R. Gordon

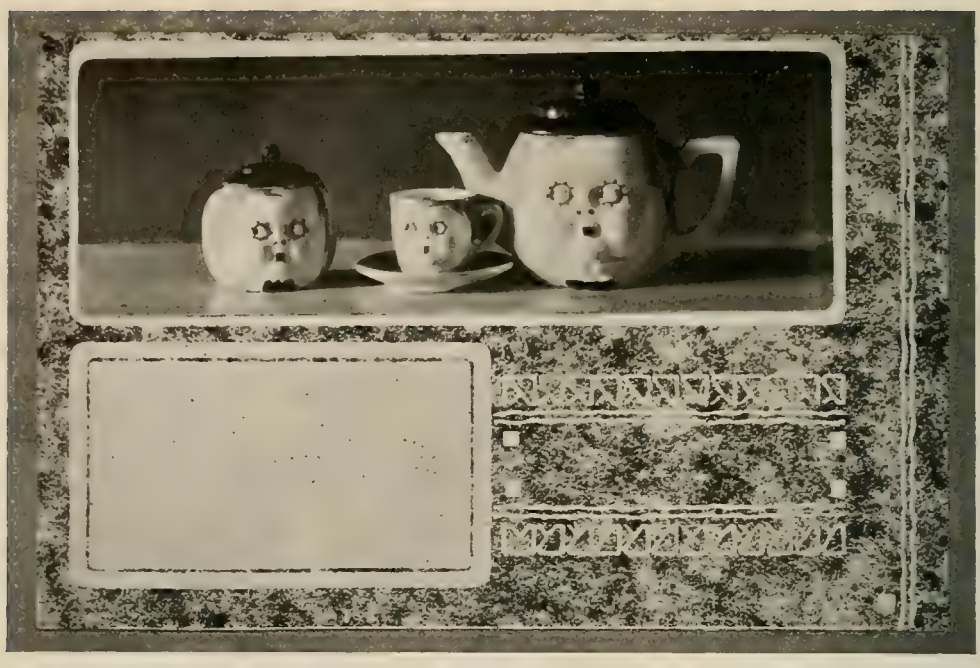
an electric light chandelier hanging above them. They were taken with my 4 x 5 Korona with Turner Reich f6.8 anastigmat lens, the exposure at f6.8 being 4 minutes, on Portrait film. The film was printed with a border mask, the candles in the mask having a Christmas suggestion, and in the white space at the bottom of the picture I write my Christmas greeting by hand and sign my name to it.

"The tea set was taken by daylight with the same outfit, but only the back half of the lens was used, the lens being stopped down to f.11 and the exposure using a 3 times filter was 1 second. I thought the little faces on the china tea set were very cheerful and would make a nice Christmas greeting if printed with a mask having a space for my name and the greeting written in by hand."

J. Lee Stocking says:

"The picture was made first. It was made early in February by the able assistance of the Wife herself. The setting was arranged and the exposure made by flashlight with neither screen nor reflector. The camera is of the Vest Pocket variety. Three exposures were made and the one best suited to the purpose selected.

"The exact size of a card was laid out on a sheet of ordinary writing paper, a space penciled in for the picture and the lettering arranged. This was then fastened to the back side of the Wife's kneading board by means of thumb tacks and covered with regular draftsman's tracing cloth, dull side up. The lettering was traced with black India ink and the outline of



Oo—TASTE IT ! By Edna R. Gordon

the card and picture space put in pencil. Two such trace lines were made. You see, I am a firm believer in preparedness. I might say here that our boy is past five and that he appears just as well pleased as though we had had occasion to use the other tracing. Inasmuch as these tracings were made up in advance, the date and weight were naturally not inked in.

"The great event was on "St. Patrick's Day in the marnin'." That afternoon I selected the proper tracing, inked in the "March 17" and the "7-⅝" and headed for my dark room. Please note the pronoun. The Wife insists on calling **my** darkroom **her** pantry. She's boss. If you could look in, you'd know. The tracing was printed on a 5 x 7 cut film in exactly the same way as one would print a negative without using a mask. Of course, the exposure was very short. This made the negative of the lettering. Just for luck the film was intensified and it **did** increase the contrast. The pencil lines printed faintly. When dry the film was trimmed along these pencil lines, thus making it the size of the card and the space marked out for the picture entirely removed, so that the film made a mask for printing. The picture negative was then brought into register on the reverse side of the mask negative and the two carefully stuck together, thus making a single printing negative. In printing, the exposure was timed for the picture only.

"If they are made and you happen to have one, I presume a printing frame, post card size would be best, for then one would simply drop in the cards to print. I myself used a 5 x 7 frame and just let the film and card

PREPAREDNESS By J. Lee Stocking

slide into one corner. Although my two cameras are both of the diminutive type, neither boasting a focusing screen, I find a 5 x 7 frame a handy adjunct.

"And may I avail myself of this opportunity to tell the World that it is absolutely impossible to raise children **properly** without some kind of a camera. I am not wealthy and even a small camera subsists on the bank roll, but let me tell you that the baby pictures of our boy have already exceeded the valuation represented by dollars and cents."

Enlarging Papers

The Eastman Line

By Sigismund Blumann

Somehow we are apt to miss the affection for the Eastman concern that it deserves from us because of its stupendous proportions. Its position among the great mercantile and producing institutions of the world so compels our respect and admiration that the deeper personal feeling is likely to be killed. Its goods are standard amongst and above the standards of any one nation: of all products we are most familiar with those marked by the E. K., but the intimacy we hold with the goods does not extend as often as it should to the producers. Personally, I love the name. The history of the man who worked up from what we accept as American beginnings to what we must accept as American achievements; the modest, self-effacing career endear him to me. The quiet, gray, genial man whose millions have made him kindlier and the power of whose wealth has enabled him and impelled him to do great deeds of philanthropy, not only for the photographic art, but for all arts, is in himself a monument to the greatness of American business and American idealistic commerce. Unostentatious Eastman! And so I approach the subject affectionately, without subsidy, none the less enthusiastic.

It is an interesting fact that in well equipped establishments where papers of a dozen brands may be found in varying quantities, the Eastman papers will most likely furnish the completer stock. Velox, P. M. C., Artura, Vitava, Standard Bromide, are names expressing staples the world over, one might say. They are the basis of comparison. Other lines are faster or slower, warmer or colder, differ from, but never excel. If this be advertising, God bless the makers of good things whoever and wherever they be, and grant me more power to do them justice. The reader may consider me sycophantic, but the Kodak people will attest that I am a very stiff-necked proposition in direct dealing for all the kind things said heretofore, now, and to be said in giving them their due.

P. M. C.

Besides being medium priced the P. M. C. papers are uniform in emulsion, speeds, and surfaces, and are coated on a splendid raw stock. As an amateur they at times prove too fast for many of my negatives but after a conversation with an expert I am convinced that in skilful hands the popularity they enjoy is not based on price but results. Moreover, the speed seems to recommend it to professionals.

Before going any further it would be well to note that the formula given on the soda cans calls for pluckier negatives than most amateurs care to produce and that for average densities a dilution of three to one instead of six to one is recommended.

Number 1, single weight, and number 10, double weight, are white, glossy, and normal only, useful in reproductions, amateur finishing and a certain class of commercial work.

Number 2, single weight, matte, comes in normal and contrast, has a slight tooth adapting it to airbrush, hand-tinting, commercial and pictorial work.

Number 6 is very similar to the above but has a smoother dead-matte surface very like porcelain, in white and normal only. For portraiture, where sheen or roughness is not desired. This paper should be mounted solid while moist enough to be pliable. When bone dry it is apt to crackle or craze.

Number 3, single weight, rough, in white only, normal and contrast, popular with pictorialists who prefer solid mounting. Splendid for brush, airbrush, or crayon.

Number 7 similar to the above but double weight, comes in normal only.

Number 4, single weight, glossy, pink, normal only. For process reproductions and portraiture. There are newspapers and half-tone men who claim that a tinted substratum produces better results than the white, and with them this is the preferred paper.

Number 5, single weight, white, smooth matte, more like number 6, gives very velvety blacks, is made in normal only and is much used for commercial finishing and protraiture.

"THE CLOUDED MOON"
(Second San Francisco—Oakland Salon, 1923)
By J. M. WHITEHEAD
Alva, Scotland

Number 8, double weight, buff, slight sheen, smooth surface in normal and contrast, for general commercial, sepia finishing and pictorial work.

Number 9, double weight, white, semi-gloss, normal and contrast. Very like number 8. Used principally by amateur finishers.

Eastman Bromide Papers.

Standard B somewhat like P. M. C. number 6. Standard C somewhat like P. M. C. number 3. Doubling letters, as BB, CC, means double weight of that grade.

Matte enamel, somewhat like P. M. C. 5.

Enamel Pense, somewhat like P. M. C. 4, but with a purplish blue substratum instead of pink.

Velvet somewhat like P. M. C. number 9.

Royal somewhat like P. M. C. number 8.

Brilliant Velvet somewhat like P. M. C. number 9, but giving more contrasty results.

Portrait Bromides.

This is a distinct line of bromide paper not to be confused with any other made by the same or any other firm. Of all strictly bromide papers it more closely simulates the tones and effects of chloride and contact papers. The Old Master surface is so outstandingly new and individual that it deserves special mention. The effect of the finished print is that of old canvas varnished, and when brown-toned, greatly resembles an old masterpiece in sepia. Incidentally, a good part of such an effect depends upon the ability of the photographer to produce a picture.

D white rough matte, and D white rough luster are duplicated surface for surface on a buff stock marked E buff rough matte and E buff rough luster.

M is the white and O the buff Old Master surface of which I spoke above. From generous experience I can assure the reader that the emulsion is all that could be desired. A fine scale of gradations, excellent blacks and considerable latitude is offered and though it be termed portrait bromide the pictorial worker will find it adapted to the widest usage.

Chloride Enlarging Papers.

Carbon Black is so well known, so generously used, and so universally liked that to speak of it at length were waste of time and space.

It has been my effort to make these articles suggestive rather than didactic. Instruction as to manipulation and formulae come with every package on every container of E. K. chemicals and may be had by the bookful for the price of a postal card or for less than that at the nearest dealer.

In closing, I want to express a hope that the reader of the series has felt impelled to try a different paper or two from what he has been using, to familiarize himself with the breadth and wealth of available material and that he may make such comparisons and arrive at such decisions as will prove advantageous and profitable to himself.

"MARKET IN NURNBERG"
(Second San Francisco—Oakland Salon, 1923)
By MAX SCHIEL
Leipzig, Germany

II. Orthochromatic Photography

By H. J. Devine, Cleveland, Ohio

It is sometimes desirable when photographing colored objects to accentuate the difference between colors, for example, we have a tobacco can with black lettering on a red circle that is surrounded by a field of green. If we wished to photograph the can so that the black lettering would stand out very clearly, we could photograph it in red light by placing a red filter on the lens. The red circle can reflect red light very well, while the green cannot. The photograph, then, would show the red circle very light, the black lettering of course, would be black, likewise the green. When photographing with a red filter, a plate must be used which is sensitive to red light with an average batch of panchromatic plates. With many filters, it is possible to predict the result of photographing through them by simply viewing the objects to be photographed through the filters. Trying this with the tobacco can and the red filter, we can form a very good idea of what the photograph would look like if taken through the filter. Substituting a green filter for the red, we see would give a very different effect, and the result through the blue filter would be still different. This particular blue filter, which is known as "C" happens to transmit almost exactly the same colors to which ordinary plates are sensitive. We can then, by simply viewing colored objects through this filter, see at once how an ordinary plate would photograph them.

These examples, perhaps, demonstrate the flexibility of panchromatic photography. The photographer can at will cause any color to photograph either dark or light, depending upon the filter used. Photographing through a filter of the same color as the object will make the object appear light in the photograph, whereas, a filter of complimentary color to that of the object will result in the object appearing dark in the photograph. For example, oranges would photograph light in tone if taken through an orange or red filter, and would photograph dark in tone if taken through a blue filter, or, what amounts to the same thing, simply photographed on an ordinary plate without a filter.

With regard to the application of color sensitive plates and filters in aerial photography, these are not used to detect camouflage, as is supposed by many, but in order to minimize the effect of atmospheric haze. Every photographer is aware that this haze shows up very strongly in photographs of distant objects made on ordinary plates. The distant scene may be clearly discernible to the eye, but the photograph on the ordinary plate exaggerates the haze so as to make the photograph appear as if it had been taken on a very foggy day. Let us take a distant mountain scene as a typical example of the screening effect of haze. The explanation of this phenomenon is that the haze scatters ultra-violet, violet and blue light much more than it does the other colors. The ordinary plate, being

"IN THE STUDIO DOOR"
(Second San Francisco Oakland Salon, 1923)
By G. W. HARTING
New York

supersensitive to these scattered rays, consequently exaggerates the haze effect. Fortunately, the fault can be partially eliminated by taking the photograph through a yellow filter which absorbs the ultra-violet, violet and blue light scattered by the haze particles and prevents it from reaching the plate. Of course, when a yellow filter is used, color sensitive plates are necessary. Fast panchromatic plates are most suitable, though orthochromatic plates can be used. In a photograph taken with an ordinary plate, the distance is completely obliterated by the haze, whereas, it is clearly discernible in one made on a panchromatic plate. In airplane photography, the terrain is necessarily photographed through an intervening layer of atmosphere of, maybe, 15,000 feet thickness, and the effect of a slight amount of haze can be very serious indeed, if filters are not used. The deeper the yellow of a filter, the more effective it is in absorbing the scattered light of the haze, but the higher is its exposure factor. The exposure in aerial photography must be very short, otherwise the vibration of the plane results in unsteady pictures. One-ninetieth of a second or thereabouts is the longest permissible exposure. In practice, it is found that the light is rarely bright enough to permit the use of a deeper yellow filter than K3, and, in general, K2 is used.

It often happens, even when the photograph is taken through a filter, that the haze effect is still noticeable in the photograph as general flatness. This can be compensated for, to some extent, by developing the plate longer than normal time, thus increasing the contrast.

Since panchromatic plates are sensitive to the whole of the visible spectrum, it would seem that no light would be safe for handling than in the darkroom. Strictly speaking, this is true. The only safe way to handle panchromatic plates is in total darkness. The interesting physiological fact that the eye is very sensitive to feeble green light of a certain color, however, enables the photographer to make use of a faint green illumination on the darkroom. The Wratten Series 3 Safelight, is designed to transmit a small amount of the particular colored light to which the eye is super-sensitive. When the white light is first turned off in the darkroom, you will observe that the green light appears to be very feeble, indeed, but that presently, when the eye becomes accustomed to it, the illumination is sufficient to enable you to see with a fair degree of ease. Although there is really very little light transmitted by the safelight, it must be remembered that both panchromatic and orthochromatic plates are sensitive to it and can be fogged if the light is not used intelligently. The plates must not be exposed unnecessarily to it, particularly if the plates are fast ones. Ordinary plates, as well as panchromatic and orthochromatic plates can be handled in the Series 3 light, but it is much better to use the brighter orange safelight, Series 1, for ordinary plates, and the deep red, Series 2, for orthochromatic plates. The only light that is at all safe for panchromatic plates is one designed as described. A red light which would be of any use whatever for seeing in the darkroom

would immediately fog panchromatic plates, because the eye is not abnormally sensitive to weak red light as it is to weak green light.

When in doubt about the safety of the darkroom illumination, a test should be made before developing exposed plates by it. This can be done by taking an unexposed plate of the kind to be developed and exposing it by sections holding it at the working distance from the light. Covering a portion of the plate with a card, turn on the light to be tested for a half minute; then moving the card to cover a further portion of the plate, expose for another half minute, and again moving it to cover another portion, expose for another minute; and finally move the card and expose a portion for two minutes. The plate then has steps with a half minute, one minute, two minutes and four minutes of exposure. It should be given twice the normal development time in total darkness. After fixation, an examination will show for how long that kind of plate is safe at that distance from the safelight. It may be mentioned that the plates are not so sensitive when in the developer. A safelight which will give no perceptible fog in two minutes, exposed as described, may be regarded as suitable if handled intelligently.

The Emporium (Third Annual) Photographic Exhibition

With Illustrations of the Prize Pictures

By Leandro N. Lewis, Jr.

"O—oo—oo-o! are they photographs? I thought they were etchings, or some of those new kinds of paintings—or something." The customer reached for a catalogue with a puzzled expression on her face and hastened back to gain a new, though probably almost as confused an impression as before of the exhibition, she had already given the "once over."

This is just one of the "wrong impressions" that had to be carefully straightened out by Mr. Shirley, San Francisco photographer, who endeavored to direct art patrons and would-be art patrons about the Third Annual Photographic Exhibition held in the Photographic Section of the Emporium during the week of September 28th to October 6th.

"You would be surprised," declared Mr. Shirley, "how many people mistook the prints for water colors, charcoal drawings, etchings, and just about anything but examples of up-to-date photography."

It was to encourage and bring the development of photographic art to public recognition that the first Photographic Exhibition of this sort was first held three years ago under the auspices of The Emporium department store of San Francisco and directed by Mr. Boeckenoogen of their Photographic Department.

"ROMANCE OF INDUSTRY"
First Prize
(The Emporium Exhibition, 1923)
By O. C. REITER
Pittsburgh, Pennsylvania

"CASTLES OF TODAY"
Second Prize
(The Emporium Exhibition, 1923)
By JOHAN HAGEMEYER
Carmel, California

The Third Photographic Exhibition, just finished, has been more remarkable than the two preceding exhibitions, both from a point of view of excellency of exhibitions and general interest shown both by contributors and the public in general.

Most of the soliciting was done by personal announcements, announcements to photographic clubs and by advertising in art journals throughout the country. Over 600 prints were submitted and from these 121 were chosen for display. In addition to these, ten prints belonging to members of the jury were added to the exhibition.

A notable point of the exhibition was the fact that many of the prize winners as well as other exhibitors were not professional photographers. O. C. Reiter, winner of the first prize, for instance, is well known as a steel magnate of Pittsburg, but has developed photography only as a hobby. His picture "Romance of Industry" is interesting not only for the fine points of pictorial values, but because it shows the artistic perspective that even a steel magnate may discover in his own industry—depicted by the powerful beauty of a giant steam shovel against the hazy outlines of a modern commercial city.

Most of the prize winners were their own close competitors for pictures that showed the same points of excellency for which their lucky numbers were selected. Karl Struss, a Moving Picture cameraman of Hollywood, by use of a soft focus lens obtains some excellent results in depicting a quality of water that is not like hardened gelatine, and his clouds soften naturally into the surrounding ether. His darkly overcast skies, however, detract from the natural effect of many of his prints.

Johan Hagemeyer of Carmel, produces a striking effect of light and shadows in his "Castles of Today" and it is worthy of note that his "Approach to the Emporium" won the special prize given by that institution, by right of its artistic merit, over contributions which offered much better advertising features.

Among the foreign contributions, those of H. W. Summons of England, attract attention by the manner in which he uses paper negatives to produce a stippled effect of artistry. Joseph Petrocelli of Brooklyn, New York, also offers the interest of methods, where he uses enlarging paper for his printing, bleaches the original print and by the application of lithograph ink produces an effect of values akin to etching. "An artist in Rothenburg" is particularly attractive among his offerings.

Mrs. Millie Hoops of Los Angeles, one of the prize winners, obtains unusually luminous, and incidentally, expensive effects by printing with platinum paper. Her "Chop Suey," emphasizes values by the use of artificial light and this paper.

H. S. Latimer of Boston, Mass., shows how the gum process may enhance the effect of a scene in color. His "On Lake Como, Italy," was particularly attractive in the quality of its reflected water.

"CORNER OF GREEK THEATRE"
Third Prize
(The Emporium Exhibition, 1923)
By G. H. S. HARDING
Berkeley, California

THE EMPORIUM EXHIBITION, 1923

"IRVING PICHEL AS LORD KURAN"
Fourth Prize
By LAURA ADAMS ARMER
Berkeley, California

"THE STEEL MILL"
Fifth Prize
By HOLMES I. METTEE
Baltimore, Maryland

"A CALIFORNIA GARDEN"
Sixth Prize
By ANSON HERRICK
San Francisco, California

"CATALINA"
Seventh Prize
By KARL STRUSS
Hollywood, California

THE EMPORIUM EXHIBITION, 1923

"FLINT RIDGE"
Eighth Prize
By MRS. MILLIE HOOPS
Los Angeles, California

"APPROACH TO THE EMPORIUM"
Special Prize
By JOHAN HAGEMEYER
Carmel, California

Henry Hussey of San Francisco, makes use of the bromoil process to produce pictures with an unusual feature of liveness. His "Canoe Landing" and "Street Mendeis-Coblentz" catch the casual eye and hold it.

For character work, "Old Man with Pipe" by T. W. Kilmer and "Mrs. McKibben" by Sophie Lauffer probably caused most comment. Both honestly catch and protray typical characters, cleverly chosen.

Among the contributions by Japanese, "A Morning Mist of the Fishing Village" by Y. Furuya of Sacramento, shows a native depiction of beauty by suggestion and simplicity. "A Portrait of Artist" recently exhibited at the Fine Arts Palace exhibition, is an unusual piece of portraiture, by F. Y. Ogasawara of Portland.

For real atmosphere "A Corner of Chinatown" by P. Douglas Anderson, brought many admiring criticisms from his fellow photographers. "That picture has caught everything I have always wanted to get into a picture of Chinatown," remarked William H. Smith, who has himself contributed two creditable scenes of Chinatown to the Exhibit. The general absence of nudes is particularly noticeable in the exhibition. It is probably not because the study of the nude is becoming less favored but that judges are beginning to recognize the fact that it is a subject that is not art in itself, but which requires unusually expert handling to effect art.

Prizes to the amount of $235 were given by the Emporium to winning contestants. The list of judges and winners include:

JURY OF SELECTION

John Paul Edwards, Pictorialist.
Louis A. Goetz, Pictorialist.
Ralph Young, Lothers & Young, Photography.
William H. Clapp, Director Oakland Art Gallery.
J. Nilsen Laurvik, Director San Francisco Museum of Art.

PRIZE WINNERS

First prize—"Romance of Industry"..... $100
O. C. Reiter, Pittsburg, Pa.

Second prize—"Castles of Today"..... 50
Johan Hagemeyer, Carmel, Calif.

Third prize—"Corner Greek Theatre"..... 25
G. H. S. Harding, Berkeley, Calif.

Fourth prize—"Irving Pichel as Lord Kuran"..... 10
Laura Adams Armer, Berkeley, Calif.

Fifth prize—"The Steel Mill"..... 10
Holmes I. Mettee, Baltimore, Md.

Sixth prize—"A California Garden"..... 5
Anson Herrick, San Francisco, Calif.

Seventh prize—"Catalina" 5
Karl Struss, Hollywood, Cailf.

Eighth prize—"Flint Ridge"..... 5
Mrs. Millie Hoops, Los Angeles, Calif.

Special prize—"Approach to The Emporium"..... 25
Johan Hagemeyer, Carmel, Calif.

Our Frontispiece

"In Old Santa Barbara" our frontispiece, by Mr. Samuel Adelstein, of San Francisco, is a portrait study of Miss Ethel Harmer, a native of Santa Barbara, garbed in the costume of her grandmother.

Miss Harmer is a direct descendant of one of the oldest Spanish families of Santa Barbara. The picture was taken in the patio of her home, before the doorway leading into the house. Several of the most prominent artists in Santa Barbara have their studios fronting on the Harmer Patio.

Mr. Alex Harmer, father of Miss Ethel, is one of the best known artists here, he is a leading painter of Spanish and early California days. His studio is one of the most interesting in the city.—E. F.

II. Finding Forgeries and Forgers by Fotografy*

How the Fotografic Film May Be Utilized to Record and Illustrate Clearly to the Layman's Eye the Covered-up Steps of the Perpetrator of Frauds in Documents of Every Kind and Description

By CHAUNCEY M'GOVERN

Hearst Building, San Francisco, California, Author of "Preparing for Trials Involving Forgery," Etc.

(Continued from the October Issue)

CHAUNCEY M'GOVERN

And to assure exact alignment, vertically and horizontally, I have had attached to the "object board" a second screw and slot, so that the holder part of the object board can readily be raised or lowered slightly, either on right or left side, in the board, when the rising and falling lens board of the camera cannot be moved any further up or down for the same purpose.

Finally, to avoid injuring documents by putting pin-holes and the like in them, I have had cut two pieces of plate glass (⅛-in. thick), which fit into the holder part of the object board. These hold the papers secure (one piece of glass being in front and one behind the documents) while making negatives of papers of ordinary size. A fotoengravers' "printing-frame," clamps and other devices are used when making negatives of books and other objects too large for the object board of the regular "F & S" laboratory stand.

As to lenses, I find it satisfactory to use IIB Tessars, F 6.3 for ordinary copying or for slight enlargements (that is, for Foto-MICROGRAFIC negatives enlarged up to four diameters), using the Micro-Tessar lenses of 72 mm, 32 mm, or 16 mm when making more extensively enlarged negatives of letters, or parts of letters, or other tiny features of the document over which a controversy has arisen, such as a fold in the paper or an abrasion or a creasing of the ink lines, etc., etc.

Added ease of operation is assured me thru my having placed on the laboratory stand four rubber-tired wheels, to be more fully described in a later paragraf.

*Copyrighted, 1923, by More Money Publishing Co.

Plates, Films for Exposures

For anyone attempting satisfactory work—result-getting work—in making negatives for court use, it is false economy to try to confine the selection of plates or films to any one kind. When it comes to making negatives of documents (or parts of documents) in dispute, no plate or film is "too costly" to use; and in the long run it is money made if the right assortment of plates or films are kept on hand, even at the risk of a box "going bad" on the shelves thru having been on hand "overtime." Almost every plate or film on the market has in its emulsion a special property which fits that particular plate or film to be THE BEST for some particular kind of exposure of a questioned document.

But one must be PRACTICAL. Therefore, I have narrowed down my selection of plates (to be "stocked") to the "Panchromatic Process Plate" and, similarly, my selection of films to three—Process, Orthochromatic, and Panchromatic Films, packed in boxes of a dozen each. And the results are quite satisfactory to my clients from every practical angle.

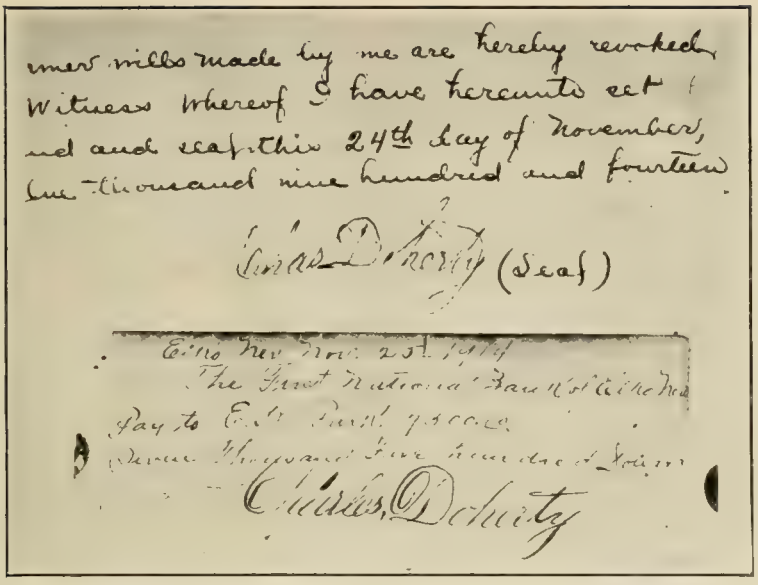
Films should be used every time an exposure is made—if a film is obtainable. Unfortunately, the "Panchromatic Process" is not yet sold in film form; hence the necessity for plate negatives when this sort of emulsion is best for a particular exposure.

The advantages of using films instead of plates, in the laboratory of a fotografic expert—besides the GENERAL advantage which film use has over plates—lies in the fact that negatives made for law purposes must be carried to court during the trial and filed with the court papers, or else with those of the lawyers or the expert witnesses. By the use of films instead of plates, the saving in weight-carrying, as well as in disastrous breaking thru carelessness of handling by lawyers and court officials, is enormous.

The space necessary to take care of a single batch of plates in size 11x14 inches is readily imaginable. For example, if it were necessary for me to keep my negatives in PLATE form (glass), in my present offices, it would cost me more than $50.00 per month extra for the additional office rent which the keeping of the glass would entail. Added to this would be the extra trouble and expense of filing the glass and re-locating a negative when same was wanted in haste. Then there is the danger of the glass negatives getting smashed right at the critical moment. And a smashed negative would never win a lawyer's case in court. There is no excuse for the use of glass plates in court work—except the "Panchromatic Process Plate"—beyond the desire of the operator to continue to do things just as his grandfathers did them.

Another Example of the Value of Fotografs in Court Work

To give You another interesting example of the manner in which Fotografy can be made to prove its quite indispensable value to the Courts, I quote for you the little story of the case of the Estate of Charles Doherty, of Elko, Nevada, illustrated by Foto engraving No. 9. Both the "story" and the engraving are taken from the October, 1923, issue of The Coast



No. 9—**TO PROVE** that altho Signature (X) is genuine, it was written YEARS before the body-writing (C) was done. Ordinary Foto-GRAFIC plates 5 x 7. Engraving reproduced thru courtesy of "The Coast Banker."

Banker, the foremost financial publication of the Pacific Slope, whose editors have kindly loaned the half-tone for reproduction here. That the happy outcome was made possible by Fotografy will be obvious to everyone.

"Case of Estate of CHARLES DOHERTY:

"In the foregoing picture, the writing labelled (A) is admittedly done by a woman nurse, on Nov. 24, 1914, in a hospital at Elko, Nevada. (The fact that the year 1914 is somewhat remote means not that this sort of thing is "ancient" history; as the same sort of thing happens almost every month; but as the later "cases" where the pictures are available are still in the hands of the Court, mention can be made here only of cases with which the Courts have completely finished.)

"The signature labelled (B) was admittedly done by Charles Doherty, an elderly patient in the hospital at the time; a wealthy man; who died the following month.

"The writing labelled (C) on the slip of paper pictured above, is admittedly the writing of Mrs. E. K. Park, a woman friend of the deceased, who was admittedly in the room of the man for several hours on the night of November 25, 1914.

"The writing of the signature (X) was done by the sick man, on the same night, but with his own fountain-pen—so claimed Mrs. Park.

"The heirs, in Elko, Nevada, submitted only the above-named facts, with the Foto-GRAFIC negative and the Foto-GRAFIC contact print, to Chauncey M'Govern, the handwriting expert, in San Francisco, with the additional statements (1) That on the date of the cheque the deceased had

less than ONE THOUSAND dollars in that particular bank; and that (2) some of the heirs "were inclined to believe" that the signature (X) was actually done by the deceased mining man . . . .

"Provided with nothing more than these facts and these Foto-GRAFIC data, Expert M'Govern made such examinations, with his microscopes and camera appliances, that he reached the following OPINIONS:

"That the signature X was GENUINE; but———

"That Signature X had been done at least TEN YEARS before the date of November 25, 1914;

"That Doherty had THEN signed his "autograf," for Mrs. Park, on the fly-leaf of a book he had THEN presented to her;

"That AFTER the death of Doherty the woman had CARELESSLY torn out the fly-leaf, and had then torn off the lower part of the sheet on which Doherty had at that time written "Elko, Nevada;"

"That the fly-leaf was then QUITE SOILED; and—

" That the woman had then written in the wording of the cheque, above the "autograf," AFTER she had repeatedly FOLDED the slip in THREE places, up and down and not across . . . .

"The expert WROTE out his OPINIONS, attaching a LIST OF REASONS WHY he had reached them, and made several Foto-MICROGRAFS (with camera and microscope combined) from the fotografic "negative" furnished him,—without going to Elko and without ever seeing the ORIGINAL papers.

"With the RESULT:

When the woman read the report of the expert and saw the illustrations he had prepared, she—well the heirs won the case without going to Court."

(Continued Next Month)

The Eclipse

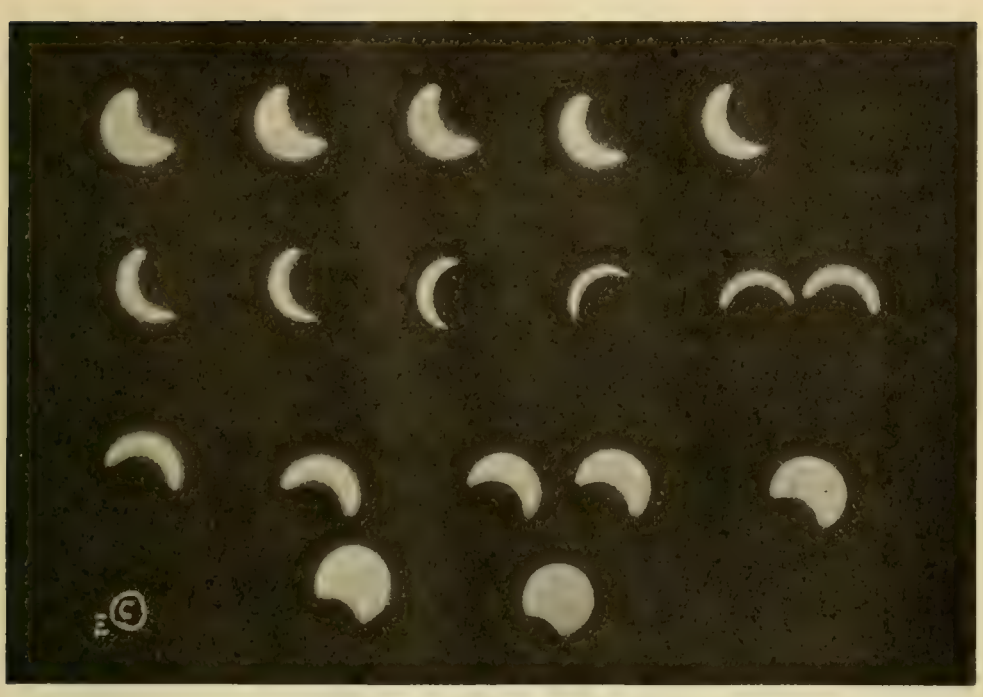
By George L. Eddy

With Illustrations by the Author

THE APPARATUS USED

SEPTEMBER 10th, 1923, came with heavy haze over Northern California and it seemed eclipse pictures would be a failure, but thanks to Mt. Diablo with its good road and elevation of nearly 4000 feet, we found the air clear from 2000 feet on up. The summit was reached just at noon and the first picture taken at 12 and then on every five minutes until 1:10, when ten minute intervals were given.

All exposures were made on same film at 1/25 second except during the dark period when 1/20 was used. Preliminary experimenting was done and found that kind of film made little difference.



Copyrighted, 1923, by George L. Eddy

Super speed and commercial ortho were exposed with twenty successive images on each without fog, 1/100, 1/50, 1/25, 1/10 second exposures, 1/25th gave best density for both printing or enlarging. Focal plane shutter also gave sharper lines and more even density.

Equipment R. B. Auto Graflex 4 x 5, 18-inch bellows, Pancratic Lense, with Wratten "G" filter, opening at F.32. I wish here to mention the Pancratic lense, a very simple affair, complete in itself. We have secured some very interesting work with it.

Looking to the west from Diablo only the uppermost ridges of the Coast Range jutted out of a bank of fog easily 3000 feet high, while to the east, Sierra foothills were also hid in fog.

Mt. Diablo is the Base Meridian for Northern California and Nevada, offering a view hardly equalled the world over, a vista nearly as great as the whole state of New York.

In our party were Mr. Paul C. Rich of Los Angeles and Mr. H. Lancaster of Martinez.

Service once meant courteous treatment to customers and prompt deliveries; it still means that, plus the determination to, in some way, make every sale benefit the purchaser.—Art in Buttons.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FOUNDED MAY 1900

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Associations as Business Builders

It is seldom that the business manager steps from his department of managing onto the editorial page, but at times there is a great need for the business end of a proposition to be presented and this is such a time.

Having been privileged to take an active part in the program of the Convention of the Photographers' Association of the Pacific Northwest, held at Victoria, I took the opportunity of talking to all the photographers with whom I came in contact making it a point to ask them what they thought of associations and conventions as a help to their business. There were two hundred professional photographers at this convention and although I did not speak with every one of the two hundred, yet I talked with the majority of them. Not one of them but what was enthusiastic about the business building qualities of associations and conventions. In fact, one man (and from others I found he was a very successful photographer as well as business man) said that he closed his studio for a month, came to the convention and spent the balance of the time in recreation. He claimed there was no doubt but what it paid him and paid him well.

There were many other photographers who likewise closed their studios for the entire time it took for them to visit the convention. These men brought all their employees and they said it paid them.

At this convention there was a model studio set up where two or three photographers could gather together, and did gather together, to show each other their various methods, discussing their individual ways of lighting, posing, etc. There were many other features worth the photographers' time and money, such as talks and demonstrations by leading photographers, demonstrations by dealers, etc.

One photographer told me that he had gotten a suggestion at the Convention in 1922 that had increased his earnings 100 per cent. The four days of close-association brought out many interesting items such as you could get only by personally visiting friend photographer's studio. This feature gives an opportunity of securing cost-saving stunts, new methods of handling subjects, new ways of getting business; in other words, ways of increasing your income.

The men who came to this convention are men of high standing, of ability, men who are business getters.

The opportunities which these men found when multiplied by at least one hundred will represent what must come to us when the National visits San Francisco in 1924. It will give us the chance of getting acquainted with our Eastern fellow members and to learn from them how they make the money to afford attending National Conventions year after year.

. Many a photographer says to himself, "I wish I could afford to go to these conventions." That is really not the question at all—can you afford not to attend the convention? They will help you to increase your capacity for business, help you to increase the volume, and the result will be so much more increment at the end of the year that you will wonder why you hesitated in the first place.

Having actually attended a convention, I see visions of many roads of knowledge, all leading to that one goal we all desire to reach—Success.

I. M. R.

Association News

Published under the authority of the Board of the P. A. of A. under arrangement with the publishers of Abel's Photographic Weekly, Bulletin of Photography and CAMERA CRAFT.

S. R. CAMPBELL, Jr., General Secretary, 722 Bond Bldg., Washington, D.C.

We are safe in premising this article with the statement that All business, new or old, is founded on Service. The greater the Service, the greater the success of the business; and organization work, such as the P. A. of A. is a business. To succeed, therefore, we must render Service to the members, in particular, and the profession in general, the former because it is expected and the latter because therein lies the growth of the Association.

But Service means a LOT of things, from mere office routine in taking care of membership records to promoting and following up National legislative measures. Between these two, there are a variety of details which might be improved and to that end, we are open to suggestions from the many out in the field, experiencing daily problems; some of which are solved and the balance held in abeyance. While we are only too pleased to render a personal or individual service and have done so on questions involving infringement of copyright, postal rates, prices on special kinds of work, etc., still our aim is to render the "most good to the greatest number" and prefer that kind of inquiry or suggestion.

The Board of Officers are working on their plan of action for the coming year, to make the Association stronger than ever and will welcome ideas to accomplish this end. Seven heads do not make an Association nor can they anticipate the problems confronting various localities. Given a good supply of material, however, they can balance one against the other and legislate to the best advantage of all. Address your replies to the Secertary, P. A. of A.

Along this same line, Mr. F. Leigh Wyckoff, Chairman of the Commercial Section, P. A. of A., is making an appeal to the Commercial Photographers as follows:

"Our Secretary, Mr. Campbell, asked me to introduce myself through this column to the Commercial Photographers but I am going to do quite the opposite. We are going to ask every Commercial Photographer to introduce himself to the Commercial Section.

"This is an Era of Co-operation, Goodfellowship and Organization among all

professions. Practically every professional man is working through an organization of some kind, except us.

"The Commercial Photographers in the cities that have local organizations are making more money today than ever, because of many reasons, and we would like to broadcast a few of the results of the Local Organizations.

"We feel you need us and we need you, but we cannot get together unless we know who you are and where. We are not going to ask you for any money or to even join the National at the present time. We just feel that it is time we helped each other by getting acquainted. Introduce yourself, Please.

Yours very truly,
F. LEIGH WYCKOFF, Chairman,
Commercial Section, P. A. of A.,
714 Smith Bldg., Detroit, Mich."

A good idea, don't you think? Get acquainted with the Chairman of the National Commercial Section, learn his plans for building up a stronger body and how he hopes to make his Section a recognized Power in the profession. A post card will register you with Mr. Wyckoff.

For the Professional

In the Interest of Commercial and Portrait Photographers

Monthly Meeting of the Photographers' Association of California,
Held at the Palace Hotel, at 6:30 P. M.
on Monday, October 8, 1923.

——o——

President F. A. Webster presided over a company of fifty-one partaking of the monthly dinner of the Association. The room was appropriately decorated with the National Exhibit of photographs from Washington, D. C. After the dinner, a very large company arrived to view the Exhibit.

During the interval between the termination of the dinner and the hour set for Mr. Edwards to review the pictures, President Webster called for a discussion among the members present on the relative merits of contact prints and enlargements, in which Mr. Terkelson and Mr. De Gaston took a prominent part.

On the President calling on Mr. Dassonville for a five minutes talk, the announcement was greeted with applause.

Mr. Dassonville: I am not going to hold a brief for projection nor for contact printing. In the final analysis, as I see the matter, you have a series of gradation represented in the negative, that is the plate with which you are going to get the gradation in your print. By gradation I do not mean the number of gradations as shown by a gradation meter, but from the standpoint of tone value. If you have a value in the negative, it will print out where the whites are not blocked out, and you will get a very charming print by contact. Furthermore, if you stand entirely for projection, you have eliminated platinum entirely, you have eliminated carbon, and you have eliminated gum printing, some of the most interesting photographic items in the art. Now, if you go into projection, so far as material to use is concerned, you have come into a very narrow field. There are very few papers to select from, and these few are, broadly speaking, alike. You are limited in the material you have to use, but you have gained one point, you have gained the power of producing the exact effect which you may desire, by selection and manipulation, and the luminous quality in your print is gained easily. But that same luminous quality is gained in contact printing. By working with a large plate you may gain the quality in that negative that you wish, and in the final print from that negative by contact you may get the same identical effect which you gain by projection. Let us consider projection as a thing by itself, irrespective of an argument between contact printing and projection. There is no argument as to whether a painter uses a

sash tool or some other brush. Now, I think the thing most needed today—and a subject which I have myself worked on very diligently for the last three years—is really high grade, fine enlarging papers, sensitive enough to use for enlarging. This is a subject very near to my heart; it has this advantage over the contact printing, that you are not burdened with a heavy kit. If you are working in a studio your average waste is about fourteen plates out of fifteen and if you are using 8x10 plates for contact work or 5x7 for projection, your bills at the end of the month are quite different. I think myself it is a real answer from the standpoint of real economy. I find this great difficulty in papers used for projection; if you take the bromide, the very fast papers, and you use a light powerful enough to see clearly what you are doing, then the papers are so sensitive that you have difficulty in exposing them uniformly, for the moment you stop down you have overcome your diffusion. So that the ideal type of enlarging paper is slow in character rather than fast, and also slow enough to stand from three to five or seven seconds. If you can get uniform results, projection has much value, particularly from the point of view of economy. But, from the standpoint of art in photography, I cannot hold a brief for projection as against contact printing. I, myself, working with an open stop, have secured negatives on paper coated by myself that have all the charm, all the softness, all the quality of diffusion in the positive which may be gained by projection. Projection has real value in that your control and the actual time of printing may have considerable latitude. The big thing is to get the negative so that it will print and give you what you want, and the method of projection or contact printing is merely an instrument for getting what you want. (applause)

President: The time has come now for the main picture event, and I take pleasure in introducing Mr. John Paul Edwards, who will review the pictures for us.

Mr. Edwards: President Webster and Fellow Photographers: Although for seventeen years my main energies have been given to the pleasures of photography, when I was called on to speak here tonight I felt like Daniel in the lion's den, for I am only an amateur, not a professional. I promise that my remarks will be rambling. Before discussing the pictures, there are a few things that I would like to get off my mind. It is my pleasure and duty to travel a great deal to Europe, and not merely to Europe but all over the continent and in every city, in Germany, France, England, and Belgium. Wherever I am, I look up the photographers there. Taking a bird's-eye view of the portraiture of Europe, I am disappointed in having to say it is not making any notable advance, probably due to the limitations of the material, but principally to the ideals of the men who are making the pictures. The greatest progress is being made in Germany in portraiture. The finest portraits being made in the world today are those made by the bromoil process, wonderful in richness, like the working of great masters. Fielder of Dresden is doing work that is perfectly superb. Five hundred and fifty million marks is his fee, which is about sixty cents this afternoon. (laughter) But his work is beautiful. In France also the bromoil process is taking, and those who cater to the intellectual are likewise working in bromoil; also in Belgium. But in England very little is being done in that way; not but what they are turning out some very beautiful portraiture. I may say that there is just as fine work being done in the United States as anywhere, and some of the richness of this work is due to many things, among others there is a good standard of judgment among the photographers as well as among the people who buy the portraits. I do not mean that there is one great, but probably a lot of contributing factors that have brought this about. At the same time there are a great many evils, from the purely layman's point of view as well as that of the practical professional. In the first place there is the selling of photographs by the yard or square inch. Probably the highest degree of perfection would be brought about by people desiring to go to a photographer to have just three or four portraits made which would be a real representation of the sitter. The dozen

price has always reduced the standard and made it more of a grocery business than an art. In various parts of the country you find men who have solved that problem, and I am inclined to think that the nearer you approximate the idea of the person coming to you for a portrait the better you will succeed. Clarence White in New York charges fifty dollars for three portraits. He submits no proofs; he makes as many plates as he desires; he considers himself the best judge of what he has done. He will sometimes use platinum, sometimes some other process; he picks the process which he considers best adapted to the particular work; and then delivers the portraits to his customers with the bill. There is certainly a greater dignity attached to portrait photography carried on in this manner than in the way it is commonly being done at the present time. As to projection or contact printing, it is a matter for the individual. If a man is painstaking, he has many advantages to find in contact printing, but it requires nicety of composition. If you are a good projection printer, you can take almost any negative and get a good print if you take the trouble. Mr. Terkelson, I believe, has said that he did not know what the public want, and I think you will find all over the United States that this is the case. Every thinking photographer feels the same way, that he does not know what the public wants, and they wish they did. It may be a very small thing, but it is one which is helping, and that is the great number of exhibitions which are being put out all through the United States at the present time. They are having an influence in developing a standard among the people and raising the cultural taste and requirements of the people. This exhibit at the Art Gallery in San Francisco has set a very high standard; and, with a few years of such exhibits, there is no reason but to believe that the people of San Francisco will want better work in their portraiture. As to photography in this country, particularly portraiture, if there has been an advance, it is hard to detect. It comes very slowly as a whole. A great many years ago, so long ago that it is an historical fact, Margaret Cameron made as fine a portrait as ever since. She did not have any studio standard of lighting; she made the best portraits she knew how. She made every effort to secure simplicity. The only thing she was trying for was a good, sincere, honest portrait of the sitter; and it is simplicity that marks the best work of today. And it is lack of simplicity that mars so much of the work of today.

So far as this exhibit round the wall is concerned, I am not going to be as courteous as Mr. Terkelson. It is doubtful if it represents the best standard of the National Association. There was supposed to be a committee who passed on the work. If there was, they did not do a very good job. One-third would be good, two-thirds not quite so good.

In discussing the pictures ranged around the room, Mr. Edwards interested everyone and gave very constructive criticisms. The prints from paper negatives were, in general, highly commended. Grotesque and unnatural posing were condemned. "Simplicity is the greatest strength;" don't use too much detail. The fast lens, putting but a small fraction of the face in focus, was not advocated. Pieces of objects butting into the picture from nowhere were shown to be inartistic. Ornaments in a room should not compete with the face of the sitter. "The greatest art lies in the elimination of the non-essential." Mr. Edwards showed by comparing examples, the use and abuse of parallel side lines. He enunciated the axiom of the "steel-yard balance" in composition—the large shadow balanced by the small on opposite sides of a picture.

Mr. Edwards, continuing, said: The California organization has every confidence and belief that they will succeed in getting the National Convention next year. The slogan is, "The City that Knows How!" Are the photographers of San Francisco going to carry out that slogan one hundred per cent? If you wish to carry it out, you must have an exhibition one hundred per cent better than this one you have here. It is a black eye for any city that does not measure well up to the best standard of the salon. If it does measure up to that standard, it is a good boost for

California. It has been somewhat difficult, of course, for me to pick out the bad and good points in a big lot of pictures like this, but if I have brought out anything in this little time that may be of use to you, I have had my reward. If you wish to measure up to the best standard, it is just study and more study that is required, of everything, including exhibitions, and the placing before you of a high ideal. Thank you. (applause)

President: On behalf of the Association, I wish to thank you for this most excellent talk.

The President announced that the Annual Meeting of the Association would now be held.

Mr. Anderson read the minutes of the last meeting, which were approved as read.

The Nominating Committee made the following nominations, which were formally accepted by the members and unanimously elected:

President, Laurence B. Morton, San Francisco.

First Vice-President, H. Lancaster, Martinez.

Second Vice-President, A. Putnam, Los Angeles.

Treasurer, Olga Dahl, San Francisco.

Directors, Paul De Gaston, San Francisco; Kathleen Dougan, Berkeley and R. E. Scharz, Oakland.

The Nominating Committee explained they had chosen purposely workers in and around San Francisco because of the vast amount of work to be done in regard to the 1924 convention to be held in San Francisco.

In the absence of the President-elect, L. B. Morton, Mr. Lancaster, First Vice-President, took the chair.

Mr. Lancaster gave a very brief talk on the National Convention, which was both interesting and encouraging.

Miss Ida M. Reed reported on the convention held in Victoria, B. C. by the Photographers' Association of the Pacific Northwest, and said:

"You had two delegates at the Photographers' Convention of the Pacific Northwest, which, I am pleased to inform you, did not cost the Association a cent."

Miss Dahl went up as the Chairman of the Convention Committee and I went up to occupy a half hour on their program to tell them about our Association in California. They wanted to be told all about us. We took a thousand California poppies with us as well as some blank receipts for securing memberships in the National Association. Miss Dahl put our plans before them in such a way they voted to abandon their 1924 convention and come to San Francisco. They realized California alone could not pull the National west and that it would require the entire coast to do it. Many of them gave us their memberships to the National and in every way showed their enthusiasm for getting the 1924 convention to San Francisco.

Some further interesting talks took place, especially in regard to raising the five hundred new members on the Coast in order to qualify for the holding of the National Convention in San Francisco in 1924, the result of which was that the members present subscribed for 124 new memberships in the National.

Mr. Lancaster closed the meeting at 10:30, as follows:

At our next meeting, we are going to have something different, and we would like to have you all present with us. Let us have your co-operation, your personal support. It is all right to write letters, but we want to get into personal contact with each one, which is the only way in which we can secure a permanent organization, and that is what we are after; and, as I said before, "If we will we can." Let that be our motto.

Our limit of achievement is the goal we set. The impossibility of yesterday is a probability today and a fact tomorrow. The word impossible is weakening.—Brooklyn Central.

STILLS FROM THE EASTMAN MOTION PICTURE SCHOOL OF PHOTOGRAPHY
Demonstrating posing, and all the tricks of lighting.

PHOTOGRAPHIC INSTRUCTION BY MOTION PICTURES

Eastman School of Professional Photography to Tour in 18 Reels

A school of photography by motion pictures! This is the latest innovation of the Eastman Kodak Company. For years this Company has conducted a traveling school set up at convenient centers to which professional photographers were invited for instruction in their own craft. To the photographers this school was well-known and on its visit to their parish they shut up their own shops and travelled to the town that had been selected for the Eastman shop. It was an established means of instruction, carried on at the expense of the company, to which portrait artists and commercial photographers who keep abreast of the advance in photographic methods, looked forward with enthusiasm. At times the class registration ran as high as 1500 and seldom less than 250 attended its sessions.

This old school, while highly successful, had limitations. It also entailed serious transportation difficulties, for an actual studio had to be carried along and set up—a studio fully equipped with lamps, screens, camera equipment, developing outfit, chemicals, paper, film and other paraphernalia, that particularly filled a good size express car. And at that it was only an ordinary working studio,—not the elaborate, elegant studio that might be and was built at headquarters, photographed and sent on its way to serve as a setting for the motion picture demonstration. It was necessary also to find a hall adapted to the indoor set-up, to engage carpenters, electricians and mechanics to put the studio together and light it. In the face of these difficulties and limitations, however, the old school continued until another and happier thought came. Why not put all this instruction and demonstration into motion pictures? Build one real model studio at headquarters, show what a photographic studio might be from door knob to darkroom, pose the models in it, demonstrate

STILL FROM THE EASTMAN MOTION PICTURE SCHOOL OF PHOTOGRAPHY
Demonstrating retouching by motion pictures.

all the latest tricks of lighting and posing; show developing, printing, enlarging and retouching and present the results without waste of time in formalities, or the hitches that are inevitable in actual practice? This is what has been done and, in the Motion Picture School of Photography, in 18 reels, the photographer may not only see more actual sittings from a greater variety of subjects than was possible under the old method, but without a moment's waste of time. All the unimportant action has been cut out. Models have been selected to give the greatest number of ideas in posing and lighting, and difficult subjects as well as good ones,—as photographers understand these terms—have been chosen for the purpose. Interiors architecturally perfect and furnishings as correct and artistic as any that come out of Hollywood suggest possibilities for photographic studios.

Lecturers accompany the pictures, explaining in detail the why and wherefores of each step in the art of picture taking as demonstrated in the picture themselves. The actual negatives and prints from each demonstration are on display as in the former school days, for the photographer to study.

And so, the old Gospel of the Eastman Company "tell the story in pictures" has been put into practice in this highly practical instruction to photographers.

Some day; perhaps, the amateur will receive his instruction in the same way.

The "school" makes its bow to the public in Albany October 2-3-4, and has the following itinerary between now and the holidays:—

Buffalo	October 9-10-11
Cleveland	October 16-17-18
Detroit	October 23-24-25
Cincinnati	October 30-31-Nov. 1
Rochester	November 6-7-8

The Amateur and His Troubles

Conducted by P. Douglas Anderson

Printing Papers

Exposing a film or plate on a subject that appeals is only the first step in photography. The second step is the anticipation of what the work in the darkroom will show on the films or plates exposed. The third step is the satisfaction or dissatisfaction experienced when making the print from the negative.

There are several methods of printing. Two of the most popular are the P. O. P. (printing-out paper), or sunlight and the D. O. P. (developing-out paper) or gaslight method. In the first the paper is placed in contact with the negative and exposed to daylight, examining the print from time to time until it has printed to a slightly darker shade than the finished print is to be. A number of the printing-out papers are of the self toning variety. They contain the necessary chemicals in the emulsion and require only fixing in hypo to complete development. Solio is a popular brand here, and requires both toning and fixing. The best results are obtained by carrying out the two operations separately. However, if desired, development can be completed in a combined toning and fixing bath.

The second method is the most popular in this country. There are several reasons as to why it is first choice. One is, that the printing and developing can be done at night. Another is, that owing to the paper being supplied in several different contrasts it is possible to get good prints from negatives that by any other process would be hopeless. One brand of paper is supplied in four degrees of contrast, some others are supplied in three, others in two only. One also has the choice of several surfaces.

Equipment

First we need a printing frame. If using film negatives the frame will have to be fitted with a piece of good clean glass. We will also need three trays, preferably a size larger than the prints we are going to make. One tray is for the developer, the second for water to rinse the prints in before transferring them to the fixing bath, the third to hold the acid fixing bath.

The light used for exposing can also be used to develop by, providing we work about 7 or 8 feet away from it. It is safer and easier as well as a saving of footsteps to use a safelight. A safelight with the average screen is best. If we haven't a safelight a piece of post office or orange paper over the light will answer nicely.

Should electric light not be available a very good way to make the exposures is to use magnesium ribbon. It comes put up in handy holders for this purpose. For igniting it either an alcohol lamp or a candle can be used.

The Work Table

A very convenient way to arrange the work table is to have the exposure apparatus at one end with a partition made from cardboard, or any other suitable material between it and the section where we load the paper in the frame and do our developing. The partition prevents stray light from fogging the sensitive materials. If we get a printing box the partition is not essential.

Printing

Dust out the printing frame and place the negative dull side up in it. Put the printing paper on top of it with the emulsion side down. The emulsion side is generally slightly concave, but if in doubt, place the corner of the paper between the teeth and bite it. The emulsion side will adhere. This test is infallible.

At first we will likely have difficulty determining which grade of paper to use

for the different negatives. A good plan is to have a package of each different grade and if the print does not look right on the grade used, try either the next softer or harder.

Distance From Light

Although a distance, between the frame and the light equal to the diagonal of the negative, will be satisfactory, I believe in working a little further away, say a distance equal to one side plus one end of the negative. The illumination cannot help but be even at this distance.

It is essential that we have our frame at the same distance each time we expose. To do this we need a system of some kind. I, myself, have devised many a way to do this, but the simplest is to have a piece of board, seven or eight inches wide and the length necessary. If the closest distance to light happens to be, say nine inches, I nail two cleats that distance from the ends of the board, with a space between them to accommodate the frame. The printing light is dropped to a height central to the frame.

If we print from several different size negatives we can make provision for them all on the same board.

Developing

After making the exposure, take the paper from the frame, hold it by one edge and slide it into the developer at an angle, then rock the tray gently. Make sure that there are no bubbles on the surface; if there should be turn the paper over and pull it over the edge of the tray to break them. Development should be complete in from forty-five seconds to one minute. If it takes longer increase the time of exposure. When the print is dark enough, take it from the developer and rinse it in the water in the second tray for a few seconds, then transfer it to the third tray, containing the acid fixing bath, making sure that the print is pushed under the surface and kept moving for a few seconds. If we are not careful about this and put it in the fixing bath any old way, stains will make their appearance and spoil the print. A print paddle or wooden tongs are very fine for handling the prints while in the fixing bath. This enables us to keep our hands out of the hypo and lessens the chance of accidentally transferring hypo to the developer. I use one pair of tongs for handling the prints while in the developer and rinsing water and another pair for handling the prints after they are in the hypo. This method of working is very fine, especially so if the skin is easily irritated by the different chemicals. It also does away with having to dry the hands after having them in the hypo and before putting them back into the developer.

Protecting the Hands

Here is another method of protecting the hands that I have found very beneficial. Before starting developing operations rub into the hands, especially around the fingers and nails, a good day cream or Hazeline Snow Cream. They are non-greasy and easily absorbed by the skin. After developing is over wet the hands and rub dry with Boracic Acid powder, then wash with a good pure soap.

Fixing

About fifteen minutes is the average time required to thoroughly fix a print in a fresh acid fixing bath. Of course, it is understood that the prints are kept separated and not allowed to pile on top of each other, otherwise fixing will not be complete.

Washing

To insure permanency, prints must be washed entirely free from hypo. If one possesses a print washer a certain amount of manual labor will be saved, but if one does not we can call into service two trays, transferring each print separately from one tray to the other changing the water each time, leaving the prints in each tray about five minutes. If one uses running water, prints should be kept separated, when washing will be complete in from half an hour to one hour. The water must not fall directly upon the prints or it might damage the paper and produce blisters. Place a smaller vessel in the tray and allow the water to run into it and overflow. Or one can use a length of rubber hose long enough to reach to the bottom of the tray.

Drying

After prints have been washed remove them from the wash water, place them face

down on a piece of clean glass and press out as much of the water as possible. Then lay out the prints separately face down on cheese cloth stretchers. These can easily be constructed from light wood, say 1-inch by 1¼-inch, stretching unbleached cheese cloth over them and tacking it to the edges. If we haven't stretchers, use clean white cloth, free from lint and lay the prints face down on it.

Glossy Prints

To give glossy prints a high finish take them from the wash water place face down on ferrotype tins, squeegee into absolute contact working from the center to the corners and allow to dry. When bone dry they will peel off themselves. If they should not, insert the point of a knife under a corner and they will spring off. Some workers dry their prints first and rewet before ferrotyping, but this is not necessary. The ferrotype tins should be kept clean, washing them occasionally with hot water.

A good waxing solution for the tins is prepared as follows:—

Dissolve ten grains of paraffin in one ounce of benzine. Apply solution to tins with soft cloth covering entire surface. Polish with dry soft cloth.

About Formulas

Some of my readers will be wondering why I have not given any developing formulas. I will give my reasons. We all have our pet formulas, but I believe in following the one given by the makers of the paper we are using. They want us to get the best results possible when using their paper and they give the formula to get that result. It is a good idea to always read the maker's instructions and follow them. P. D. A.

Salons and Exhibitions

The "Salon" and the "Royal"

By H. D'Arcy Power

I have just been through the two main British photographic shows of the year and a few words of comment may not be unacceptable to our readers, particularly as American photographers are so well represented and in the case of our home state, no less than six per cent of the exhibits at the Salon fall to California.

The last year has been a period of depression for the world at large and if I may judge from what I have seen in Italy, Switzerland, Germany and now in England, photography has shared in it. I was here last year and wrote some account of the very excellent things in the three exhibitions of last Autumn. I regret I cannot herald any advance. On arrival I asked a journalistic colleague, who was earlier on the ground, what I should find at the Salon, and he replied, "Oh, it is saner." Having seen it I agreed. It has the fault of so many exhibitions, but one that is inexcusable in an institution featuring superior excellence—there are far too many exhibits of the same class and character—splendid examples of the "usual thing." Without a catalog I walked around the hall looking for things to arrest my attention. The first to attract me was a beautiful realization of all that is best in seashore landscape by J. B. Eaton of Melbourne. Very interesting and new in conception is a dramatic figure of an actress crossing the stage under the lighting of the spot light which makes a halo on the background. It is very clever—the only American exhibit to arrest my attention, but evidently by one of our Japanese residents, F. Y. Ogasawara of Portland. A. Misonne's "Le Chemin" is recognized at once by its unmistakable quality. Struck by the delightful gradation and lighting of an interior I turned to the catalog to find that most powerful of all photographic artists, Alexander Keighley shining in an unusual field. Quite a number of nudes prove that

photography can display beauty without "nakedness" and among these a decorative treatment of the figure by Yvonne Gregory claimed my attention. These were the only things that directly held me. It is useless to write in detail of the 403 exhibits that cover the walls. They include 25 pictures by our California workers. The 403 could have been cut down to half the number with increase of effect.

American Exhibitors in the London Salon, 1923, are:—

Anderson, P. D., Harris, C. M., Herrick, A., Hussey, H. A., all of San Francisco, Calif.; Goetz, L. A., Harding, G. H. S., both of Berkeley, Calif.; Edwards, J. P., Oakland, Calif.; Archer, F. R., Kales, A. F., both of Los Angeles, Calif.; Doolittle, J. N., Mortensen, W., Struss, K., all of Hollywood, Calif.; Fleckenstein, L., Lewis, R. C., Seely, R., all of Long Beach, Calif.; Smith, Mrs. E. L., San Diego, Calif. Hanna, F., Arizona. Gilpin, Miss L., Colorado Springs, Colo.; Blickensderfer, C., Denver, Colo. Hatten, F. W., High, G. H., both of Chicago, Ill. Brinkler, A., Libby, F. O., Lovejoy, Dr. R., Ogasawara, F. Y., all of Portland, Maine. Mettee, H. I., Baltimore, Md. Latimer, H. A., Boston, Mass. Schaefer, E. J., Detroit, Mich. Bucher, L. F., Newark, N. J. Boughton, Miss A., Eickemeyer, R., Harting, G. W., Hervey, Mrs. A. B., Lubschez, B. J., Macdonald, Pirie, Nakayama, L. I., Rabinovitch, Sipprell, Miss C. E., Watkins, Mrs. M., all of New York, N. Y. Dooner, R. T., Philadelphia, Pa.; Reiter, O. C., Rice, A. W., Torrance, H. C., all of Pittsburgh, Pa.

Now for the "Royal"—the exhibition of the Royal Photographic Society has greatly changed with years. Time was when it was the home of the scientific and technical and the devotees of photography as a fine art were step children at its portals—hence the Salon, etc., Today he would be an ill informed man who maintajned that photography as art were better represented elsewhere. In fact, the least purely photographic attempt at an effect is to be seen in this show, where in a nude study the figure has been rendered in hard outline, seemingly by washing away the gum pigment deposit to within a line's breadth of the figure. At present the Royal is both catholic and exacting. It made a slaughter this year and pictorial photography is represented by only 126 exhibits and is all the better for the severe selection. Among those there is only one Californian, Mr. H. A. Hussey's, "Under the Pier," a decorative line arrangement of vertical and horizontal lines which claimed my attention before I knew whose work it was. Here as in the Salon it is useless to specify or criticise individual pictures that our readers may never see, but in justice to the artists I cannot refrain from mentioning the fine "Mead" of Angus Basil; Herbert Lambert's "Joyce;" the lovely evening effect of Bertram C. Wickison's the "Day's Work Done" and Horace Jackson's "Willows." America scores one excellent picture by our old worker, Clarence H. White, "Boy With Arrow."

The Technical and Scientific exhibit seemed to me poorly selected. A much better exhibition of radiograms could be collected from San Francisco laboratories in half an hour. The Natural Historic section was much better and among the small collection of stereoscopic transparencies were some splendid examples of the value of binocular vision for recording natural facts. For the department of color work there was nothing to praise, except the few prints illustrating the Raylo process of Mr. H. C. J. Deeks, which were fully described in our pages in the July number of Camera Craft.

The Autochrome exhibit displayed nothing of exceptional merit and some things that could well have been left out. It was certainly much below the wonderful set of autochrome stereograms of last year. Much more interesting and of direct public importance were the portrait films taken by the Kinematography. They showed the great value of such apparatus in obtaining not only a living picture, but the material for selecting a pose or expression for enlargement and printing in the ordinary way.

American Exhibitors in the Royal Salon, 1923, are:—

Hussey, Henry A., 64 Pine St., San Francisco, Cal. Gilpin, Miss Lauara, 30 West Dale St., Colorado Springs, Colo. Libby, Francis O., 97 Vaughan St., Port-

land, Maine. Alexander, Kenneth, Fassbender, A., MacDonald, Pirie, Marshall, Miss Julia N., McLean, Miss Amelia H., Muray, Nickolas, Stoltz, Mrs. Elizabeth A., White, Clarence H., all of New York, N. Y. Dooner, Richard T., 1822 Chestnut St., Philadelphia, Pa.

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Provincial Exhibition, New Westminster, B. C.

It is only fair to those entering prints from many lands to the only international Salon in British Columbia and as a matter of fact Western Canada, that they should hear of the success scored by so liberal a support of the International Exhibition of Pictorial Photography, New Westminster, British Columbia. The number of entrants was all that could be hoped for, the quality was all that could be desired as was its international character, prints being received from America, Canada, England, Scotland, Denmark, Holland, Germany, Italy and Japan. The exhibits were all hung in specially built rooms on a wall of neutral paper with an abundance of reflected light in which the prints showed up to good advantage. Thousands upon thousands have enjoyed the displays, which bore a great message to many of them, and indeed in a younger part of the country where many are longing for exhibits of artistic and pictorial value, without being able to quench their thirst, this exhibition has done much good.

Awards made in the different sections were as follows:—

Section 1, International Pictorial Photography.

"Solitude" (Bronze Medal)—Geo. J. Hughes, F. R. P. S. Bridge of Allan, Sterlingshire, Scotland.

"The Haunted House" (Bronze Medal)—J. H. Leighton, Bradford, England.

"Arch of Constantine"(Silvergilt Medal)—H. Y. Summons, Virginia Water, England.

"Violas" (Bronze Medal) — Francis A. Tinker, Sheffield, England.

"Tantalizing Pirrette" (Bronze Medal)—A. D. Brittingham, Bridgeport, Conn.

"Gaiety Under the Willows" (Bronze Medal)—Louis Fleckenstein, Long Beach, California.

"The Husbandman" (Silver Medal)—O. C. Reiter, Pittsburgh, Pa.

Section II, International Professional Portraits.

"Study" (Bronze Medal)—John Stuart Paine, Washington, D. C.

"Miss Mischief" (Bronze Medal)—A. D. Brittingham, Bridgeport, Conn.

"Mother and Daughter" (Bronze Medal)—Frau Minya Diez-Duhrkoop, Hamburg, Germany.

"Lilli Holm" (Silver Medal) — Aage Remfeldt, Christiania, Norway.

"Talmud Study" (Silvergilt Medal)—A. S. Weinberg, Groningen, Holland.

"Johnnie" (Bronze Medal)—Louis Fleckenstein, Long Beach, Calif.

Section III, Pictorial Photography (Open to British Columbia only).

"The Mountain Storm" (Bronze Medal)—D. E. Atkins, 3822 Georgia E., Vancouver, B. C.

"Spring" (Silver Medal) — Henry K. Twata, 378 Cordova St., E., Vancouver, B. C.

A special award of a Silver Medal was given Emilio Sommariva, Milano, Italy for an exhibit of Fifty Portrait Studies.

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Willoughby's Contest

The idea which inspired the Historical New York Photographic Contest is the result of a desire on the part of the firm of Willoughby to elevate the standard of amateur photography—to demonstrate the magnificence of New York to encourage amateur photographers to co-operate thru their individual efforts in presenting its views to the Public—and to perpetuate the beauties of New York City. The winning views will be displayed in the Willoughby windows each month and will be published in a Souvenir Booklet in 1924. The contest begins October 1st, 1923, and ends February 1st, 1924. There are six cash prizes. For particulars address Willoughby's, 110 West 32nd St., New York City, N. Y.

Club News and Notes

Club Secretaries and Others will oblige by sending us reports for this Department

Newark Camera Club

During this month, October, we shall have the pleasure of viewing on our walls the work of Mr. William A. Alcock, of Brooklyn. Chairman Hall, of our Print Exhibit Committee, informs us as we go to press that he has received a letter from Mr. Alcock, in which he says:

"Mine is a miscellaneous collection, as far as subject goes, running from a blank wall, or an ash can, to a nude human figure. As to process, I have Bromide, Chloride, Carbon, Carbro, Gum, single and multiple, Gum Platinum, Gum Palladium, Platinum, Palladium, Kallitype, Bromoil and Bromoil Transfer."

Surely this is a great variety of processes, and none of us should miss seeing the exhibition.

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New Officers for the A. C. C. of A.

President—M. R. Witt, Photographic Society of Philadelphia.

Vice-President—L. F. Bucher, Newark Camera Club.

Secretary—C. H. Partington, Camera Club of Cincinnati.

Treasurer—H. W. Greene, Camera Club of Cincinnati.

BOARD OF DIRECTORS

W. A. Alcock, Pictorial Photographers of America.

R. M. Crater, Orange Camera Club.

C. M. Jaquith, Portland (Maine) Camera Club.

J. C. Stick, Southern California Camera Club.

J. L. Tormey, Photographic Club of Baltimore.

Raymond Trowbridge, Chicago Camera Club.

The HEADQUARTERS of the Association will now be Charles H. Partington, SECRETARY, Rooms 18-19 Arno Building, 4th and Sycamore Streets, CINCINNATI, Ohio. **All remittances for dues and other items should be sent there.**

Notes and Comment

Reported by Wm. Wolff

L. J. Stonehart of Santa Maria, has added a Rockford Glossy Print Dryer to his already finely equipped studio.

Edw. Gledhill, Santa Barbara, showed the writer some very fine portraits upon his last trip to that city.

A. Von Rohan, formerly of San Francisco, has opened a ground floor studio in Santa Barbara. He specializes in Miniatures. He is assisted by his charming wife.

Jones Photo Supply Co. of San Francisco, has moved into their new location. It's a great improvement on the old place.

Fred Twogood, Riverside, is still sinking oil wells on Signal Hill.

H. A. Parker, Pasadena, is again at the helm after a brief illness.

Winsted Bros., Long Beach, have retinted their store a pale blue. It's really a good improvement.

Shirley Bacon, Long Beach, is still in the Alley making money. No opposition to the mint. (Only a Kodak finisher.)

Paul Grenbeaux, the Still Photographer

of Hollywood, is showing some very fine colored photographs of many celebraties.

Jack Sorillon is still with Pop Moffett in Tulare.

The Central California Photographers' Club has been organized to facilitate professional understanding between the photographers of the San Joaquin Valley.

They will hold their regular meetings on the second Tuesday of every month, which meeting will be preceded by a dinner and a social hour so that the various members may become better acquainted with each other. (Here's hoping they keep up the good work and all join the Photographers' Association of California.)

Claude Laval, commercial photographer, addressed members of the Fresno Lions club yesterday. He exhibited various pictures, which because of the time element or light necessary, could only be taken at certain times of the day.

Laval emphasized that there are four distinct branches of photography, and the commercial photography is entirely different from portrait photography, where light conditions may always be controlled.

He also pointed out that the commercial photographer must be a man of imagination, in order to be able to tell the story desired in the picture and told of various methods used to obtain freak pictures and animated cartoons in making films.

Moulin Entertains

Gabriel Moulin of San Francisco, entertained the commercial photographers and their wives on Tuesday, October 9th, at his residence, 145 Buena Vista Terrace. During the evening he showed a set of colored slides picturing his trip from the east to the coast. Last year he drove from coast to coast and it was such an enjoyable trip he wished to share it with his friends. Refreshments were served and every one had such a good time, they almost forgot to go home.

PHOTOGRAPHERS WANTED

United States Civil Service Examination

The United States Civil Service Commission announces the following open competitive examinations: Photographer, wet or dry plate, $1,400 to $1,800 a year. Assistant Photographer, wet or dry plate, $1,100 to $1,400 a year. The examination will be held throughout the country on November 21st. It is to fill the vacancies in the Departmental Service, at the entrance salaries named above, plus the increase of $20 a month granted by Congress and vacancies in positions requiring similar qualifications.

Applicants for the position of photographer, must have had at least five years' experience in general photography, three years of which must have been in dry-plate or wet-plate work.

Applicants for assistant photographer must have had at least three years' experience in high-grade photographic work, two years of which must have been in dry-plate work or wet-plate work. Of the remaining one year's experience six months may have been in photostat operative work, the other six months being in miscellaneous work of high-grade character.

Competitors will be rated on the subjects of practical questions, education and experience. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

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Mrs. Ednah Morrison Starts the Ball Rolling

Through the efforts of Mrs. Ednah Morrison, who used the Loan Exhibit of the Photographers' Association of California in getting together the Central California Photographers, the first club was formed on September 25th at Visalia, California. This club is called the Central California Photographers' Club and is the first of the series of clubs organized under the direction of the Photographers' Association of California.

They will meet on the second Tuesday of each month at different studios from Fresno to Bakersfield.

Mrs. Ednah Morrison was elected secretary and general manager; and May King, of Fresno, Billie Buck, of Bakersfield, and L. M. Powell, of Hanford, members of the executive committee. The club will meet in Dinuba on October 9th.

The following-named are charter members of the new organization: Mr. and

Mrs. E. M. Hammond and Paul Hammond, of Porterville; Mr. and Mrs. L. M. Powell, of Hanford; Mr. and Mrs. Jack Wiley, W. E. Ward, Ednah Morrison and Rebecca Nowland, of Visalia; H. M. Seron, and Billie Buck, of Bakersfield; and May King and H. Conradi, of Fresno.

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Instruction in the Rudiments of Photography

By William H. Zerbe

October 2nd, 1923, to April 29th, 1924.

The Department of Photography of The Brooklyn Institute of Arts and Sciences begs to announce that it has again secured the services of Mr. William H. Zerbe to conduct a course in Photography.

These courses given by Mr. Zerbe for the past ten years have been the means of making a large number of struggling amateur photographers proficient in the art, both technically and artistically.

As heretofore, there will be a class for beginners and one for more advanced workers. Students who have taken the courses in previous years are enthusiastic over Mr. Zerbe's painstaking methods of instruction. Mr. Zerbe always brings himself down to the level of the students, refraining from using technical terms, so that one cannot but help advance in his photographic work.

Classes meet on each Tuesday evening at 7:45, beginning October 2nd, 1923, and ending April 29th, 1924.

The tuition fee for members of the Institute is $10.00, and $14.00 for persons not members.

Write for Prospectus giving full particulars. Address: The Brooklyn Institute of Arts and Sciences, Academy of Music Building, Brooklyn, N. Y., or Mr. Wm. H. Zerbe, 345 Spruce Street, Richmond Hill, L. I., or Miss S. L. Lauffer, 86 Greene Avenue, Brooklyn, N. Y., or Mr. Wm. A. Alcock, 44 Wall Street, New York City.

Our Book Shelves

Practical Printing Processes

By Frank R. Fraprie

A very practical treatise on the different printing processes containing a wealth of standard formulas. It gives in great detail, information about the printing processes most commonly used and touches lightly on the processes not so well known. It will undoubtedly prove a very handy reference book to the worker who is interested in doing his own work and should prove an incentive to those who do not, but are planning to do so. Published by the American Photographic Publishing Co., Boston, Mass. Price, paper 50 cents, cloth $1.00.

—P.D.A.

Making an Enlarger

By Chester A. Kotterman

This is the era of small cameras and enlarged or projected prints. A number of our photographers are interested in the making of photographic apparatus. To them number 189 of the Photo Miniature should prove of great interest. The drawback about the focusing enlarger to the beginner at any rate is the difficulty of determining when his image is sharp. With the self focusing enlarger or projector this is eliminated. The Photo Miniature gives very complete instructions and working drawings for the construction of an automatic focusing enlarger. The chief point of interest in this treatise is the design of the cam for the movement of the lens and negative to insure sharp definition. The author gives very thorough working instructions and numerous photographs of its use in the actual apparatus.

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Premo 5 x 7, 19-inch bellows draw, extra lens, Cells, tripod, case, etc. Outfit cost $118.65, only $35.00. Aldis Series 1 F 5.6, 20-inch focus lens, cost $365 for $175. Planbel vest pocket, F 3 lens. Cost $96 for $60. Like new. G. MacMillan, 4706 Winthrop Ave., Chicago, Ill.

OUTFITS FOR SALE—Continued

Two Eastman kodak commercial printers, latest improved, cost $60.00 sell for $40.00 each. Used but guaranteed good as new. Will ship C.O.D. anywhere. Frank Jacobs, 904 Third Ave., Seattle, Wash.

3¼ x 5½ Graflex back for Speed Graphic camera, five holders, pack adapter, 5 x 7 Graflex shutter. C. E. Pring, 649 W. Mission Ave., Wilmar Station, Los Angeles, Calif.

Ehrnemann Heag 9 x 12 cm. with Goerz Celor, pack adapter and plate holders. List $97. Exchange for Radio outfit of equal value, or stocks or bonds. Box 220, Holstein, Iowa.

Finger print camera. F & S like new. Pack adapter. $35.00. Also compact finger print outfit in case, with Kuhne's "Finger Print Instructor" $10.00. Officer Sanford, Box 134, Napa, Calif.

4 x 5 Korona view, 9 x 12 cm. Ica Ideal, 5 x 7 Eastman View, with Anastigmat lenses. Splendid values. Write for particulars. Want Graflex. C. Lilie, Van Meter, Iowa.

$60.00 buys complete Home Portrait outfit 8 x 10 camera, Focal plane and Packard shutters, six cut film holders, post card back and adapter, portable background and reflector with Eastman folding stands and case and folding studio stand. No lens. Idella Cook, Box 1042, Klamath Falls, Oregon.

3A Speed Graphic without lens, three plate holders, fiber carrying case. Fine condition. $37.50 net. Tracy I. Storer, University Farm, Davis, Calif.

R. B. Graflex 3½ x 4½, magazine and three lenses. Will split the outfit and sell any or all for about sixty per cent of list. Stereo reflex, vest pocket focal plane camera and lenses, all bargains. A. J. Frohock, 312 E. Second St., Moorestown, N. J.

4 x 5 R. B. Auto Graflex with new Graf 8½-inch by 9½-inch Var. focus lens, filter, case, F. P. adapter, R. F. holder, 6 plate holders. A $250 outfit for $125. Might accept 2C Special Kodak or good 8 x 10 View as part payment. Also have 4 x 5 plate camera, case and plate holders, price $8.00. M. L. Jones, 4751 N. Paulina St., Chicago, Ill.

4 x 6 Deckrullo Contessa, f 4.5 Zeiss, tropical model, focal plane shutter, speeds 1/20 to 1/2800, ten time speeds 1/7 to 1/20th second, leather case, three double plate holders, film pack adapter, fine condition, $115.00. 9 x 12 cm. Deckrullo same as above, regular model, one Ramstein Cloud, one Wratten filter, telephoto attachment, $125.00. George L. King, 22 East 135th St., New York City.

Graflex Naturalist 4 x 5 equipped with Turner Reich No. 6, 15, 24 and 36-inch convertible lens. Complete with leather case, plate holder and roll film adapter. Almost new and in excellent condition. Will cost new almost $600. Bargain at $250. C. L. S., Box 144, Napa, Calif.

Ica Trona Camera, 3¼x4¼ plates and films, Carl Zeiss f 4.5 lens. Also Distar lens, 6 plate holders and carrying case, like new. Cost $114; take $85. W. E. Haller, 35 Davenport Savings Bank Building, Davenport, Iowa.

9 x 12 cm. folding Mentor, 6-inch Carl Zeiss F 4.5 lens, 3 double plate holders, film pack adapter. Brand new $75. Less than cost. Ralph Kennedy, Exchange Building, U. S. Yards, Chicago, Ill.

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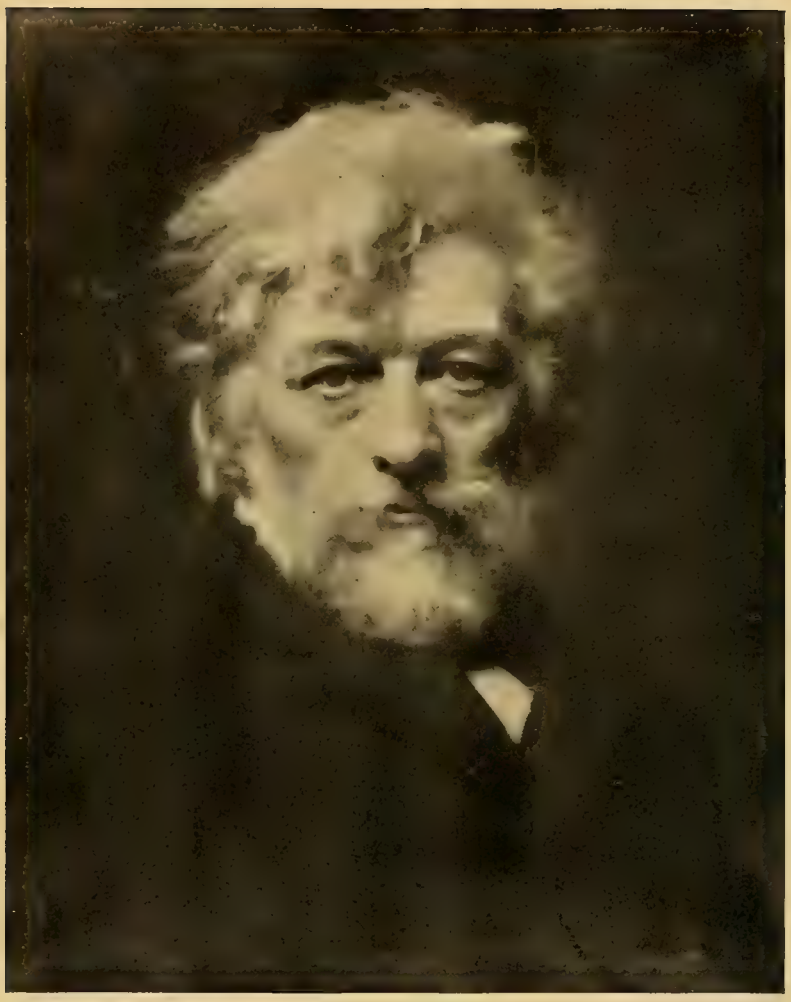


WILLIAM KEITH

Exhibited at the Salon of
The Camera Pictorialists
of Los Angeles, 1923

By W. E. DASSONVILLE
San Francisco
California

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

H. D'ARCY POWER, M.D., Editor-in-Chief
EDGAR FELLOES, Associate Editor
P. DOUGLAS ANDERSON, Associate Editor

CLAUS SPRECKELS BLDG., SAN FRANCISCO, CALIFORNIA

VOL. XXX DECEMBER 1923 No. 12

Put Clouds in Your Landscapes

By J. G. Pratt

With Illustrations by the Author

Winter is here, and unconsciously the camera enthusiast's fancy turns to thoughts of his dark room and the summer's accomplishment, and incidentally perhaps to some photographic contest which is not far off. You get the old box of negatives and pick out the most likely landscapes, but how often it happens that, though excellent records of the vistas you have seen, they have little value pictorially as alas! there were no clouds to give a pleasing atmosphere, or if they were there you did not get them.

In a small way, at least, we all study the old masters and pick up points here and there on art composition, but when all is said and done, the rules we generally apply are—is it pleasing, does it hold the attention, and is it true to life.

Thus, in viewing a landscape we are first attracted by the source of interest, whether it be figure studies in the foreground, or the brook that winds its silent way through the meadow, but subconsciously, at least, we take in the whole view, and if the landscape is not well balanced with a pleasing sky, we lose interest and mentally consign it to the realms of the uninitiated.

Interpolating cloud effects in pictures where none originally existed has long since ceased to be a point of criticism; rather the pictorialist should be criticised for not showing equal concern for the tonal values of the sky as for other portions of the picture. Nature's sky is never white. Sometimes it is blue, and sometimes hazy, or dark with an approaching storm, but when at its best it is fleeced with clouds and without this setting the beauty of the view would be sadly lacking; and a little manipulation in making the enlargement will enable one to add this pleasing atmospheric quality to an otherwise uninteresting subject.

FIGURE 1—THE WASHINGTON MONUMENT

The chief difficulty in securing a proper rendition of clouds in photographing a landscape is that if we expose for the sky, the foreground more often than not is almost too thin to print; and similarly, if we expose for the foreground, the sky is too dense and we are little better off than before. Sometimes, however, when the clouds are bold and well defined, like the heavy cumulus in summer, and the foreground is unusually bright, a fair rendering of both can be secured, assisted possibly by more or less shading in the process of printing. The Washington Monument, shown in Figure 1, is from a straight negative, although two thicknesses of tissue

FIGURE 2 (Bottom) FIGURE 3 (Top)

paper were used under the plate glass of the printing machine to hold back the foreground. This photograph was taken in July on a commercial orthonon film, using a Dagor lens at stop 16, and giving an exposure of one-fifth of a second through a Wratten and Wainwright K-2 color screen. Of course, the sky portion could be locally reduced, but this is troublesome and a delicate operation, and since more often than not no clouds are available when a pictorial opportunity presents itself, the writer has found it decidedly better to print them in from another negative.

Cloud negatives of various kinds should be secured at different times of the year as opportunity permits, in order to have appropriate ones available for all occasions. The winter clouds shown in Figure 2 were taken

FIGURE 4—IN THE HEART OF MARYLAND

in December, using stop 8 and one-half of a second exposure, while the summer clouds in Figure 3 were given one-fifth of a second exposure at stop 16, a K-2 color screen being used in both instances. A portion of this last negative has been used in interpolating the sky effect seen in Figure 4, which previously was "bald," and detracted greatly from the rest of the picture.

This process of "faking" in clouds is not at all difficult in bromide work after a little practice, although one must use numerous test sheets so that the sky and the foreground will be so timed in the exposure that they will reach complete development at exactly the same moment. The writer, as do a great many photographers, places the enlarging paper on the easel in a printing frame, ordinarily without a glass, as one is not necessary for holding the paper flat, and it is difficult to obtain a glass which is free from scratches or bubbles.

Put the landscape negative in your enlarging camera and get the image properly posed and focused on the white paper on the easel. Now run a mark across the sheet following the skyline, and cut a piece of cardboard, somewhat larger than the print being made, to this shape, to be used alternately as shaders for the sky and foreground. A mark should be made on the sides of the printing frame to indicate the elevation of the

skyline, and it has been found that two little strips of paper, pasted on, answer very well for this purpose.

Next, use a test sheet to get the proper exposure and run off a full-sized print, noting any special shading it may require to give proper balance to foreground and distance, the amount of exposure given, and also the exact amount of time required for complete development, which should be somewhere in the neighborhood of one and one-half minutes. Now put in another sheet, holding back the sky, unless it is already quite dense, by dodging with the upper half of the cardboard at hand, at the same time using the left hand to do any special shading required in the print. Mark the top of this sheet before laying it away, and then proceed to make one or more duplicates.

Put the white paper back in the frame and focus your cloud negative on the portion above the skyline, and proceed to make test sheets until the exposure is ascertained which takes the same amount of time for development as the landscape portion, and you are then ready for the final issue.

Place one of the exposed sheets in the printing frame (right side up) and make the exposure, using the lower half shader with a short up and down movement, allowing the clouds to vignette down below the sky line (indicated on the sides of the frame) about one-half inch, but excluding the light from the remainder of the print. If the sky is a little over or under printed, and in the first attempt it is generally the former, this can be corrected by slightly less exposure in the subsequent prints.

The method described may consume an hour or more of rather concentrated effort, but the time will be considered well spent when you remember that a thing of beauty is a pleasure forever.

Hard to Find

A commercial kodak finisher in Florida recently made a tour about the state in the hopes of placing mail agencies for his business among drug stores in the smaller towns. Arriving in one town of about a thousand population, he selected the better—appearing of the two drug stores, and after studying the window displays, walked in and asked to see the proprietor. The clerk gave the information that the proprietor would not be in for at least an hour, mentioning that probably he could attend to the visitors' wants.

"Well," replied the other, "I notice by your display that you take in films for developing. Do you have a good kodak finisher?"

The clerk gave him a peculiar look, and began to search through the show cases and look through the stock of films. After several minutes of taking and replacing most of the goods on the shelves, the clerk answered.

"No," he said, "I can't find any. I think we sold the last one yesterday."—Contributed by E. N. Musgrave, Dunedin, Florida.

"CASTELLANO"
(Salon of Camera Pictorialists of Los Angeles, 1923)
By JOSE ORTIZ ECHAGUE
Madrid, Spain

The Seventh International Salon of Pictorial Photography under the Auspices of the Camera Pictorialists of Los Angeles

By James N. Doolittle

While it is highly improbable that the man who first gave expression to the truth that "there's nothing new under the sun," had followed the progress of pictorial photography, he has, for the purposes of review, provided a very handy thought.

To take issue with the optimist who penned the prefatory remarks in the catalog of the Seventh International Salon that "pictorial photography moves ever onward—with new workers, new processes, and new methods of expression," we search in vain for the new processes, the new treatments and methods of expression, although each year new workers do appear.

There is, however, a glimmer of hope in the realization that an effort is being made to create new standards and to present a newer viewpoint but it is with the effort alone that we are forced to content ourselves rather than with the results achieved thus far and in that contentment to admire the perfection of a technique that has marked the advancement of our older workers.

The close of an important salon is generally the signal for a wail from the rejected contributors who decry the fact that "control" processes are dominating our shows to the exclusion of the simple mediums which rely solely upon excellence of subject matter rather than the tricks and devices of the artist who adopts the more flexible vehicles of expression. To those individuals who lift up their voices I should like to especially point the truth that this salon offers not a single example of indifferent bromoil work. The several carbons are perfect, the gums of Moerdyke, Halluber and Leighton present not only flawless technique, but are highly interesting subjectively. The photogravures by Judge are a revelation of skillful manipulation of a difficult process by an amateur and the single "powder print" by M. Curt Schmidt is a tribute to the skill of this well-known exhibitor.

It does not follow, though, that the pictorialist who chooses to express himself in the gelatino-bromide or chloride process is employing an easy means to a given end, for the work of W. E. Dassonville in a product of his own manufacture, the unparalleled examples of the art of J. M. Whitehead, and the portraits of Mme. D'Ora merely proves that the artist needs no crutch nor vesture to help him in the artifices of showmanship.

"OUT WITH THE TIDE"
(Salon of Camera Pictorialists of Los Angeles, 1923)
By STANLEY W. EUTROPE
Sydney, Australia

"LANDSCAPE"
(Salon of Camera Pictorialists of Los Angeles, 1923)
By D. MISCHOL
Schiers, Switzerland

The bromoil process seems to be the especial target of disgruntled critics who endeavor to defend mediocrity in the so-called simpler processes, but it should be observed that, in order to successfully produce a perfect bromoil, one must first have mastered the details of bromide printing. It would be profitable, therefore, to indulge in a little sober self-analysis and realize that if you can command a perfect technique in the manipulation of the so-called simpler processes, no fear of competition by the controlled mediums need be entertained.

The mounting of prints, a matter deserving a lengthy dissertation by itself, is a detail of showmanship which bears rather too strong evidences of little or no thought, or in many instances, too much misdirected thought for it seems that the effort in producing a worthy picture is so utterly exhausting that the mounting is a last thought—an opportunity for the utilization of waste products. On the other hand, a less important subject is almost invariably presented in such a manner as to suggest an effort on the part of the artist to compensate a lack of pictorial merit by elaborate mounting.

The foregoing remarks apply perhaps less strongly to this year's salon than to any of its predecessors, but are a generalization of impressions gained through a rather intimate observation of the works of the world's foremost pictorialists during the last dozen years. That nothing "new, startling nor strange" has occurred to give evidence of the widely heralded forward movement, is the basis of my note of pessimism, although, as I have remarked, all effort to depart from the conventional has but served to create a deeper appreciation of established standards.

Christmas Greeting Card

By P. Douglas Anderson

With Illustrations by Mrs. Holly Todd

On a recent visit to a prominent studio here in San Francisco, operated by a lady, Mrs. Holly Todd, a greeting card attracted the writer's attention. It was an Easter card, finished in colors. The idea and how it was carried out was very original—so much so that I wanted it for reproduction in Camera Craft. However, Mrs. Todd expressed the wish that I wait until she prepared her Christmas Card, and use that instead.

The studio specializes in copying old photographs, taking a figure out of a group, working in a background and making an individual portrait out of it and work of like nature. It is only natural that her greeting card should be made after this manner.

The first step in making the card was determining the design. A drawing showing a couple dressed in the clothes of "Ye Olden Times" furnished the idea, and now to carry it out.

No. 1

No. 2

A copy negative was made of the drawing on a Seed plate number 23 (see print No. 1).

A plain white background was necessary to carry out the idea. This meant blocking out the negative in the manner shown in print No. 2. To block out the negative, proceed as follows: First thin out a little of the opaque to about the consistency of good cream. Now place the negative emulsion side up on the retouching deck. Use a fine sable brush and outline the figure with the opaque. After the figure has been outlined use a larger brush to apply the opaque to the balance of the negative.

If one should have a large area to block out, it isn't necessary to apply opaque to it all. Work out your outline and say half inch to one inch back. Now cut out a paper mask to cover balance of negative to be blocked out and paste it down at the edges. The paper must be opaque. The kind in which the plates and cut films are wrapped is very fine for this purpose.

A copy negative was next made of print No. 2, also on a Seed plate No. 23; development was carried a little farther than in first copy. This gave a whiter background and less detail in the figures.

The photographs of the heads of Mr. and Mrs. Todd were made the exact size to fit the figures. The heads were cut out, cutting slightly under. The edges were next thinned down with sandpaper and then they were pasted down on the figures in the correct position.

No. 3

No. 4

The branch of holly was sketched in as was also the top of the hat. A few lines were also added to break up the hard edge where the foreground was blocked out.

Print No. 3 was now ready for copying. The copy negative was developed just a little farther than in any of the others, giving a still whiter background and less detail in the figures. See print No. 4.

This final print was tacked to a board and air-brushed in colors. When dry it was mounted on a light gray card with a cream underlay and tied at the two top corners with ribbons the colors of which were in keeping with Christmas.

FORTHCOMING EXHIBITIONS, 1924

January 4th to 31st, 1924—The Photographic Exhibition of the Portland Society of Art, Portland, Maine. Last day for entries, December 15th, 1923. Particulars from the Secretary, O. P. T. Wish, L. D. M. Sweat Memorial Art Museum, Portland, Maine.

March, 1924—Pittsburgh Salon. Last day for receiving prints Monday, February 4th, 1924. Particulars from P. F. Squier, 237 Avenue B., Westinghouse Plan, East Pittsburgh, Pa.

Taking the "Photographic Story" of a Famous Hotel

By Ralph Young

With Illustrations by the Author

To the casual reader who peruses the new photographic booklet published by the Palace Hotel, showing the many luxuries and conveniences which it offers to the traveling public, the amount of time and effort back of the pictorial story will be unknown. But to those who appreciate and study photography the illustrations accompanying this article will probably immediately suggest something of the planning and work required in their making.

The series consists of twelve photographic illustrations, which have been made into a booklet. Unlike most hotel literature, which are usually merely a picturization of the different portions of the hostelry without animation or sequence, this booklet portrays by pictures and a small amount of copy, the stay of a honeymoon couple at this world famous inn, from the time they alight from a taxicab at the entrance to their departure.

It is a human-interest story that has already attracted wide attention in hotel and traveling circles and its telling may mark a new era in "humanizing" hotel advertising.

The most difficult feature in the making of these photographs was to obtain a nice balance of commercial and pictorial values; to show as much as possible of the attractiveness of the hotel and at the same time to keep the illustrative theme sufficiently to the fore to carry the continuity of the story which they were to suggest. Another difficult feature was the directing of the models in the pictures. The taking of the scenes naturally caught the attention of the guests and visitors at the hotel and the models were working in practically every picture before a crowd of interested by-standers. Even those who respond perfectly to direction in the studio were restive under the close scrutiny of so many strangers. With from six to fifty persons in each scene, many of them hotel employees totally unused to the camera, the job of direction multiplied in its responsibilities.

You can easily appreciate how several days were spent in planning the series. One entire day was spent in selecting the view points for the camera and the locations for the lights. Another day was spent in working out the continuity of the story. Still another day was occupied by the details of arranging to have hotel employees on hand for certain scenes at just the right time and to instruct the proper persons to have tables set, flowers arranged and other details taken care of so that the pictures could all be taken according to a carefully worked out schedule.

Each picture was timed to be taken at a certain hour. How well the details were worked out is shown by the outstanding fact that at no time

AT THE REGISTRATION DESK
Palace Hotel

By LOTHERS & YOUNG
San Francisco

did the actual taking vary more than a few minutes from this schedule and the lighting equipment and cameras were hauled away from the hotel less than one half hour later than was originally planned. It took one entire day to complete the series.

Two electricians worked one whole day to install the lighting. Over 1500 feet of cable was used. Two trucks were required to haul the lighting equipment from the studio to the hotel.

In making the pictures, nineteen people were required. One person was in charge of the models. Two electricians and four helpers moved and connected lighting equipment. Ten professional models were used. The camera man and director completed the troupe. In addition to the professional models, many of the hotel employees were called upon for the background effect of several of the pictures.

PRIVATE DINING ROOM
Palace Hotel

By LOTHERS & YOUNG
San Francisco

The illustrations accompanying this article are representative of the series. The first shows the young couple at the registration desk. It was found that by placing the camera in an alcove a very pictorial archway effect could be obtained which formed a pleasing frame for the scene at the desk.

The private dining room scene was one of the most difficult to make on account of the lack of space for the camera. This picture, however, illustrates probably better than any other one, the completeness of detail as shown in these photographs. The table was set in every respect just as it would have been for an actual dinner party. Waiters were trained to act their parts naturally and by doing just the things that they would be doing if actually serving the diners.

For the ballroom scene, which was taken in the morning, it was necessary to arrange to have the entire orchestra present. Not a single player

THE BALLROOM
Palace Hotel

By LOTHERS & YOUNG
San Francisco

is missing and each one is dressed correctly. A noticeable detail is the arrangement of the extra clarinets at the feet of the clarinet players, exactly as they would appear any evening.

One of the most interesting pictures, from a photographic standpoint, is that of the young bride reading by the window of the living room of their suite. In the background is seen a long section of Geary Street in very clear detail. This picture was made in order to portray two facts—the home-like comfort of a hotel suite and the location of the hotel itself. The young bride is relaxed in a comfortable chair reading, while through the window streams warm sunshine. Also you can see a busy, well known city street, localizing the position of the hotel in the midst of a city's activities.

The new booklet will receive world wide distribution. One of the ideas behind its conception was to so graphically picture the hotel that the story would be understandable to everyone, even foreigners who do not read English.

SUNSHINE AND COMFORT
Palace Hotel

By LOTHERS & YOUNG
San Francisco

(Illustrative of Article on Page 569)

SNAP THE HOME FOLKS

Contributed by R. L. McColm, Ashbury Park, N. J.

You have been snapping pictures of friends and parties this summer at outings, picnics, excursions, etc., and now that the summer has fled, you put your camera away until next vacation time. Get it out, clean it up and make a few snaps each month of the folks right in your house. The front yard, the back yard; time exposures indoors if you like. Look over the most treasured photos you own. What are they? Dollars to doughnuts they are back-yard pictures (all too few) of the home-folks. They're valuable. What appeal will those hilarious groups you took this summer have in ten years?

APPARATUS USED BY W. ROBERT WHYTE

The Eclipse

By W. Robert Whyte

With Illustrations by the Author

In anticipation of the coming partial eclipse of the sun on Monday, September 10, my eldest boy experimented with an Adon telephoto lens to ascertain what length of bellows would be required to give a picture of the eclipse large enough to be easily seen without the necessity of making an enlargement. This was done by observing the distance back from the lens that he could get a sharp image of the sun on a card some way back in the room. The result was the long wooden tube shown in the illustration. The joints of the tube are rabbited, the interior mat-blacked, and the back fitted with two bow springs to hold steady the ground glass frame or a 4x5 plate holder.

As the image of the sun travelled across the plate at the rate of about an inch a minute, it was necessary to make arrangements for carrying out all movements with promptitude. So a round-headed screw was made to project from the upper part of a window sash after the sash was lowered, with corresponding holes in the lower side of the tube half way through the wood, in order to give a steady support to the tube at whatever angle it might be pointed while taking a sequence of exposures.

No. 2 No. 6 No. 10

Ten exposures were made, giving an excellent idea of the appearance of the eclipse at its various stages. The illustrations shown are Nos. 2, 6 and 10. The other and intermediate exposures are not shown, as they would occupy too much space in so valuable a magazine as "Camera Craft," but these three give a clear idea of the apparent movement of the lunar body across the face of the sun. As the sun's movement across the sky is from left to right, the silhouette of the moon appeared to move across the sun from right to left.

The illustrations are from contact prints; that is to say, are not enlargements, but straight prints from the negatives. Time was about two seconds (much less would have been better) using a four-times screen.

A Very Delicate Scale

By C. R. Lowe, Hebron, Nebraska

With Illustrations by the Author

Tastes differ. There is no accounting for it . So says Horace. Why one man likes onions and another detests them, I do not know. It takes jazz to enthuse some folks, to others the Hallelujah Chorus is as nectar,, and I have heard say some prefer a lie though the truth would answer their purpose better. In photography, tastes differ. Some will like one sort of a story in our Camera Craft, some another. One is content to press the button and be finished by the finisher, while another sees glorious visions when he takes a shot of M. Q. I take delight in contriving my own apparatus. Sometimes it may cost me more than if I had bought it, but it is my own product. You will pardon my eccentricity—I acknowledge it as such—you probably have your oddity in petting some old negative as art though in it you cannot tell a horse from a cow. I've seen just that. It is to kindred spirits I would have a word. Our editor thinks there are enough such to make my story worth a couple of pages.

If you like to do your own work, one of the first things you will need is a pair of scales. Now, do not be excited about it, for what I did you can do, just whistle and say twenty times, "Any day, in just this way, I can make this very delicate scale." We apologize to Couè. And then tomorrow go to work following these directions, and you cannot go wrong. This scale will need to be fairly accurate, handy, easily set up and put away again, and since you are going to make them, they will have to be cheap enough to pay you to do so. In all of which, this scale will qualify. An outlay of a nickel and forty-five minutes of time will meet the cost, a pocket knife, hammer and a pair of pliers are all the tools you will need, and you can get along without the pliers, if there are none at hand.

The material you will need is as follows:

a. One straight smooth stick say twenty inches long and three-eighths of an inch square. Or a little flag stick, if you have one, will be capital. Cut a notch an inch from one end just deep enough for a six penny box nail to lie and be flush with the top of the notch.

b. One piece of piano wire No. 20-22, twenty inches long, which can be obtained from a tuner or a dealer, he may sell you a yard of it for a nickel. Any small spring wire will do. A quarter of an inch from one end bend to a right angle. Drive this short bend into the stick midway between the notch and the end, making the wire lie along the length of the stick.

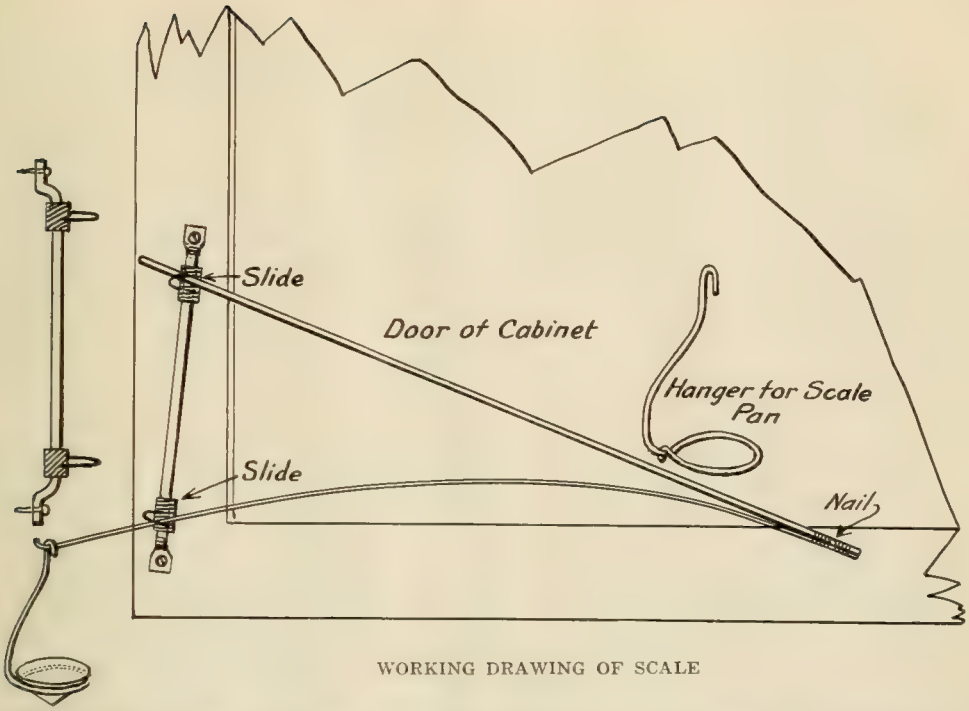
c. A piece of cotton cord to wrap the wire and the stick securely on either side of the notch so as to bind the two firmly together.

d. One stick ten inches long and one half an inch square. An inch from each end and on the same side, notch half way through the stick, or a trifle more, and cut away between the notches.

e. Several strips of heavy paper, like the cover of this magazine, three quarters of an inch wide. Wrap once around the ten inch stick on the part which has been cut away, and then pasting as you wrap, go round half a dozen times more. Make two of these. They are for slides. Do not wrap too tightly or they will slip with difficulty when dry.

f. Broom wire, or piano wire, if you have some left, say a foot. Make two staples half an inch wide and an inch and a half long. Lay the stick with the slides on the table, cut-away part up, and through the right edge of the bottom slide—not through the stick—stick a pin, then cut it off leaving it half an inch long as it stands out from the slide. From the other side of the slide, and a quarter of an inch from the pin on each side, make two holes in the side with a pin, and put in these holes one of the two staples, it will then straddle the stub of the pin. Put the other staple in the other slide. It will be found a good thing if you have a file to smooth the ends of the wire staples as you can press them into place more easily.

g. A board ten by twenty by one inches, on which to mount this apparatus. Drive a six penny nail in the lower right corner an inch from



WORKING DRAWING OF SCALE

either edge, from the back. An inch from the other lower corner lay the ten inch stick with the slides, staples up and through the middle of the lower half inch part drive a lath nail, leave the other end free. (I have my scale mounted on the door of the cabinet in which my photographic stuff is kept, so need no mounting board.) Hang this board horizontally, put the end of the wire through the lower staple with the stub of the pin in it, the end of the long stick through the other staple, and place the end with the notch over the nail. Now for the scale pan.

h. A piece of broom wire is as good as anything, better than some, say sixteen inches long. On one end of this make a circle two and a half inches in diameter, fastening the end back to the "standing part" of the wire. At this point bend the wire so the circle is square on the end of the wire. Half an inch from the circle bend wire to a right angle to the plane of the circle, and cut wire to eight inches. One half inch from the end of the wire bend the wire back on itself with a short turn, and leave the end of the wire stand out from the standing part say an eighth of an inch. Let the opening in the turned part be smaller than the diameter of the piano wire, then the scale pan will hang at any point on the piano wire without moving easily. Bend the standing part of the wire so the hook is over the center of the circle.

i. An old post card. Cut a three-inch circle, also a radius. Paste one of the lips of this latter cut, turn over on the other lip to dry. This is the scale pan. When this is played out, make another. I used one made of letter paper for five years, then threw it away for the fun of making a new one.

Now put the "pan" in the circle, hang all on the end of the piano wire and adjust so that the pan hangs horizontally. Now for the weights. You can buy yours, but as you are making things, I suggest that you make them. I made mine. You will have to go to the apothecary shop, where any gentleman will accommodate you.

j. Foil, such as the film is wrapped in, some gummed paper, Passe partout or a druggists label, or the pasted flap of an envelope, and some inches of broom wire. Cut a five grain length of wire, you will have to weigh it out, that is why you went to the drug store. Bend this into a pentagon. Cut three grain length, bend into a triangle, make a two grain length and bend into an open angle. Make several one grain lengths, they get lost easily.

As for the heavier ones, cut a piece of gummed paper drop it in the druggist's scale pan, put in a sheet of foil, tear away or add more to make the desired weight, fold all together, press flat under your heel on the floor, paste on the gummed paper, and write the number of grains weight. Make other weights as you want. Keep them in a little tin box, e. g., shoeblacking box, as you will have one of them somewhere about.

For the lighter weights, hang the pan at the end of the piano wire, put in the required weight, and adjust by means of the slides so the wire balances against the stub of the pin. Take out the weight, and fill the pan with the chemical to be weighed till it balances again at the point of the pin. That is all there is to it. For the heavier weights hang the pan back towards the notch, the longer or the lighter the wire the more sensitive the scale. One grain deflects my wire an eighth of an inch which makes the weighing of one half a grain quite accurate, and a quarter of a grain a very dependable estimate.

I have used my scale for nearly ten years, and I assure you it fulfils every requirement of the photographer in the lighter weights. When you are through with it take it down, hang the whole thing on a nail. You will find it easily manipulated and a joy.

CAMERA DRESSING

Black straw hat dye of the collodion type applied with a camel hair brush, makes a fine dressing for black leather cameras. An old camera worn "brown" with use can be made to look like new with one or two applications. This dye dries quickly and is waterproof.—Contributed by R. L. McColm, Ashbury Park, N. J.

III. Finding Forgeries and Forgers by Fotografy*

How the Fotografic Film May Be Utilized to Record and Illustrate Clearly to the Layman's Eye the Covered-up Steps of the Perpetrator of Frauds in Documents of Every Kind and Description

By CHAUNCEY M'GOVERN

Hearst Building, San Francisco, California, Author of "Preparing for Trials Involving Forgery," Etc.

(Continued from the November Issue)

CHAUNCEY M'GOVERN

Making Permanent Records, by Fotografy, of Temporarily "Restored" Ink-Writing:

If writing on a check or other valuable paper has been done with ink, and some of that writing has been "eradicated" with certain chemicals, procurable at any small stationer's, some of the "removed" ink, or at least the outlines,—still remain "mordanted" in the fibers of the paper. The acid covers up the ink that has SUNK into the fibers of the paper—only a portion of the ink having been removed on the blotters that are used with these acids . . . A clear view of this eradicated ink can be secured by subjecting the paper to the "fumes" of a certain other chemical, if the chemical and the paper are enclosed for some ten minutes in a small air-tight box. But this "restored" ink writing is visible to the human eye for only half an hour (or less) after taking the paper from the air-tight box. After that the restored writing gradually fades from visibility by the human eye direct or through a microscope.

Here is where the photographer can step in and make a PERMANENT record of what the fumes brought out. For not only will the ordinary Foto-GRAFIC film (or plate) show up the restored writing plainly, but, by reason of the peculiar chemicals in the emulsion of the fotografic film or plate, the "restored" writing—quite **yellow** instead of **black** in the original paper, will appear in the Foto-GRAF to be much BLACKER and CLEARER than it was to the human eye direct.

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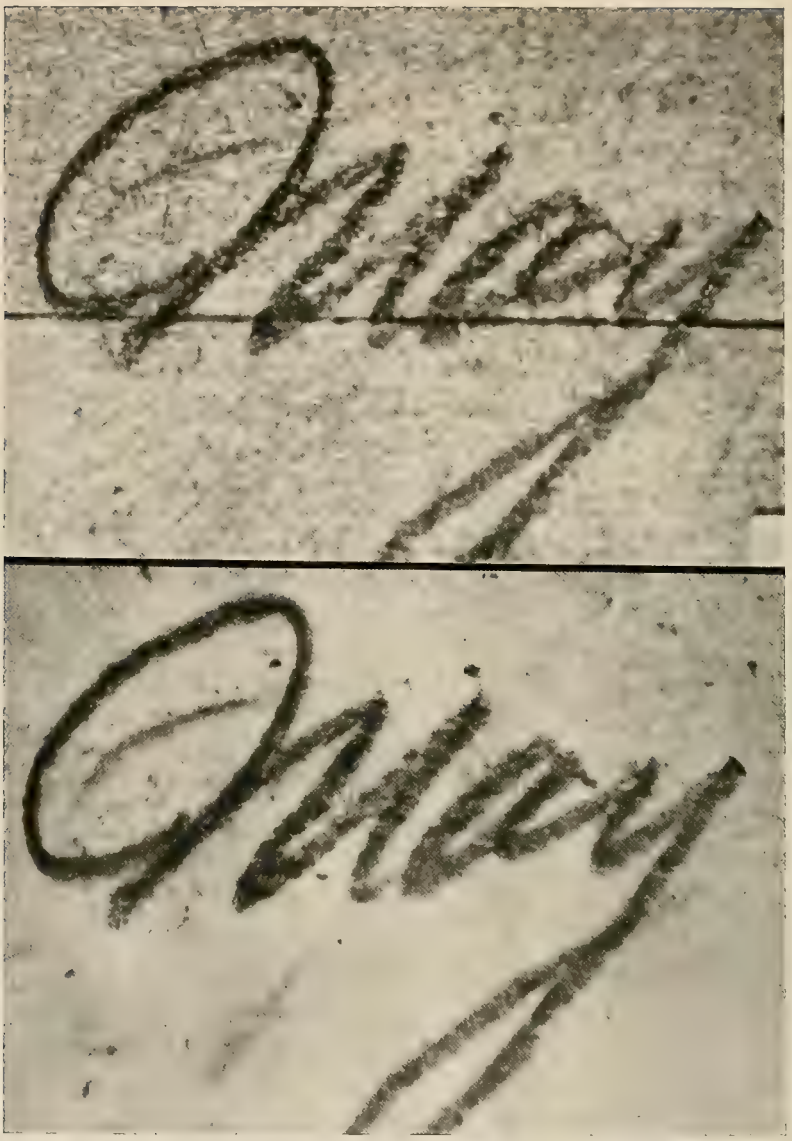

No. 8—TO PROVE that the word "June" had NOT been written on paper where word "May" now appears,—and that word "Apr" had first been written there, with pencil, and then erased with a "rubber" . . . . Top part from Process film; oblique lighting from two arc lights; lower part from Panchromatic film; oblique lighting from only one arc lamp . . . Young widow kept her $10,000 farm as a result of these two pictures.

Closer Comparison Made Possible by Fotografy:

The use of Foto-GRAFIC copies of questioned and admitted writings in court trials has still another distinctive advantage over the old-fashioned method of using the original papers themselves when comparing the respective writings.

In the old way, each juror handled the cumbersome and fragile papers severally and individually, thus probably injuring the papers to some

extent each time they were handled. Valuable time of the court and other jurors was lost; carefulness of examination and comparison on the part of each juror was obviously sacrificed through their consciousness that others were waiting for the papers; and each juror had to handle the microscope individually.

By use of Foto-MICROGRAFIC illustrations, however, each juror sees simultaneously—without bother or work of handling the whole of each original paper—only that portion of each document which affects the particular question before the court. And the Foto-MICROGRAFIC illustrations are so made that all the writings concerned are placed side by side, or above and below, the questioned writing—placed ideally for a juxtaposition comparison—by single glances—without moving the eye.

By using Foto-MICROGRAFIC illustrations, for example, each signature concerned—disputed and admitted—can be fotografed on the **same** plate (or film) by simply so FOLDING each document,—and then overlapping them,—that only the respective signatures show on the ground glass of the camera (and thus in the finished picture). Then we have resulting contact prints which clearly show, enlarged, the true and questioned writings side by side.

Another decided advantage of using the Foto-MICROGRAFIC illustrations is that PARTS of words and letters can be **clipped** by scissors from their respective whole prints—to be placed side by side and pasted on thin sheets of cardboard or cloth for quicker, easier and more truth-telling ocular display. In this way the likeness of any disputed letter or letters known to have been written by a certain writer are seen by the jurors much more clearly—or else the **un**likeness of the respective letters is all the more sharply emphasized to the eyes (and minds) of the jurors.

All laymen are aware that if two people said to be "alike" are viewed simultaneously, side by side, cheek to cheek, their real resemblance is rendered all the more clear—or else their **dis**similarity is brot out more forcibly to the spectator's eye. The same is true of writings, or of finger prints, or of anything else of the kind. And while the human brain is liable to err considerably on "remembering" how one writing really appeared when one's eye has passed to, and is examining, a second writing, there is little chance of the same man's memory failing him in the comparison of two writings if he has enlarged fotos of each placed side by side.

It will be obvious to anyone that if each juror has right in his own hands a Foto-MICROGRAFIC print, enlarged, of each of the writings to which a witness is referring, the juror more clearly follows him and learns the truth more surely.

(Continued Next Month)

This photograph won the California Cup presented by
the Photographers' Association of California
to the Commercial Section of the P. A. of A.
(National Convention, 1923)
By KAUFMANN & FABRY COMPANY
Chicago. Illinois

The California Cup presented by the
Photographers' Association of California
TO THE COMMERCIAL SECTION
Photographs' Association of America
Won by KAUFMANN & FABRY COMPANY
Chicago, Illinois
(National Convention, 1923)

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FOUNDED MAY 1900

VOL. XXX San Francisco, California, December, 1923 No. 12

A Merry Christmas and a Happy New Year!

GREETINGS to All Our Readers and Friends!

Christmas is associated with many things. With some it is the time of taking stock of what has happened during the past year and making their plans for the new year. To many others it is a time of giving and receiving.

Photographers, whether they are amateurs or professionals, should be very happy that they are able to use their craft to make distinctive presents that are representative of themselves.

The arrival of the fall and winter seasons seems to be the signal to many among the amateur ranks to lay their cameras away until next spring. They imagine making pictures is only a summer pastime, yet photography is a hobby that can be practised twelve months every year.

Here in California where the weather conditions are exceptional, our best outdoor studies are usually made during the so-called winter months owing to the atmospheric effects being more ideal. In other parts where the winter is so severe that it practically stops all outdoor work enlarging, printing and process work in all their branches can be enjoyed.

One can spend a great deal of time with profit to themselves making studies by artificial light. The light source may be electric, flashlight or magnesium ribbon.

The lists of subjects are varied. It may be portraits, table top and genre subjects or some thing else along these lines.

Every time I trip the shutter of the camera, I feel like shouting "Hurrah for photography and the men who made it possible." It is a hobby to love and one that will repay in unlimited pleasure any effort we put into it, once a photographer always one.—P.D.A.

An Omission and an Error

On page 551 of our November issue we omitted the name of Mrs. Gertrude T. Arnold of Oxnard, California as one of the exhibitors to the London Salon. This we regret as we are very proud of all of our pictorialists.

An error was made on the same page in mentioning F. Y. Ogasawara as being from Portland, Maine. He is a member of the Oregon Camera Club of Portland, Oregon.—I.M.R.

PUBLIC LIBRARY

THE LEOPARD LILY, By Albert M. Shaw

A California Wild Flower

The Leopard Lily—Lilium Pardalium

By Albert M. Shaw

With Illustrations by the Author

One of the most modest yet attractive of our California wild flowers is the spotted or leopard lily of our Coast Range canyons. It is not so particular as to soil or location as some other fine specimens of the lily family, and so takes quite kindly to domestication and transplanting in our home gardens.

It is usually found in cool, moist mountain canyons, often by living streams, yet it seems to thrive almost equally well on high well drained slopes. Carl Purdy, the well-known California flower and bulb specialist, says of it, "It is the strongest growing and most easily cultivated of the Western lillies and one of the best in the world. On the Pacific Coast it can be grown in any garden where moderate watering can be done and the soil is of decent quality. The stout, leafy stems are three to seven

feet high, bear a number of recurved flowers with red tips and orange centers spotted with maroon."

In Southern California the stems begin to show late in March and the flowers appear about the first of July. Well matured bulbs in favored locations sometimes grow to a height of ten feet. Eight to thirteen flowers on a stem is the usual number.

Butterflies are greatly attracted by the color and fragrance of the flowers and many may be seen going from flower to flower during sunny summer days of the blooming season. One such visitor very accommodatingly posed for one of these photographs while the view camera was set up and focused, and he seemed quite oblivious of disturbing surroundings while enjoying the hospitality of the flower.

These photographs were made in a sheltered, well-wooded canyon with living water less than twenty miles from Los Angeles.

This beautiful flower will appeal especially to those of us who remember the tiger lillies of the old fashioned New England "front yards." The two lillies resemble each other very much but are of different species.

California Association News

Organized for the purpose of co-operation toward the betterment of our profession.

IDA M. REED, Secretary, 703 Market Street, San Francisco, California

The Flying Squadron of the Photographers' Association of California, from San Francisco and vicinity, left on the morning of the sixth for Los Angeles by auto, arriving there on the seventh.

The party consisted of Laurence B. Morton, President; H. Lancaster, First Vice-President; Ida M. Reed, Secretary; Olga Dahl, Treasurer and Chairman of the Convention Committee; L. A. Ireland, Secretary of the Commercial Photographers' Association of San Francisco; Lee L. Stopple of the Standard Photoprint Company, and P. Douglas Anderson of Camera Craft. Sigismund Blumann, Efficiency Engineer and Honorary Member of the Photographers' Association of California, joined the party at Los Angeles.

On the evening of the seventh a meeting was held with the Commercial Photographers of Los Angeles and many helpful conclusions were made.

The next morning Mr. Shipman of the Shipman Process, Inc., gave a demonstration in his studio of his new automatic printer. This was enjoyable and instructive as showing how a busy photographer can save time and increase his income.

The big event of that day was a visit to the Mary Pickford-Douglas Fairbanks Studio. Here the party was given an especially cordial welcome because of the common interest in photography. Miss Dahl asked Douglas Fairbanks what he thought of associations and if he would become a member of the Photographers' Association of America. His answer was: "Sure, I'll sign. I believe in associations and that everybody should join. Thank you for giving me this opportunity," and he signed forthwith. The picture is shown just to convince you that this really happened. Miss Dahl also talked with the head cameraman of Douglas Fairbanks—Mr. Arthur Edeson, and he also expressed himself as favoring associations and readily agreed to become a member, which he did.

DOUGLAS FAIRBANKS JOINS THE P. A. OF A.

Miss Olga Dahl, treasurer of the Photographers Association of California, is here shown getting the signature of America's screen idol on the dotted line of a P. A. of A. application blank.

Mr. Fairbanks himself employs a number of still photographers as well as a staff of movie cameramen, and is an enthusiastic believer in better photography. He spoke with hearty approval of the work the National is doing to raise the standard of the profession and it is his hope that the next convention will be held in the West, as he would like to attend providing his work at the studio will permit.

The trip through the studios was such an interesting one and Mr. Frank Iaaotson was so entertaining that the party disliked to leave.

However, many pleasant things were ahead as the Commercial Photographers' Association of Los Angeles had invited us to the Biltmore Hotel for dinner. Here Mr. Eugene Swarzwald of the Keystone Photo Service, Inc., Los Angeles, acted as host to the entire satisfaction of everybody.

At 8 o'clock the photographers of that section gathered in the Chamber of Commerce and a most enthusiastic meeting was held, again under the able direction of Mr. Swarzwald. After a few talks explaining the object of the meeting seventy-seven members were signed for the P. A. of A.

Los Angeles and vicinity displayed as much, if not more enthusiasm than we did who have been in the midst of the fight to bring the Convention west, so that we now go forward with a feeling of comradeship for our southern members that will spur us on to equal them in both enthusiasm and work.

Mr. E. S. Curtis, the world-wide known photographer, gave a very interesting talk on the pictures of the National Exhibit from Washington, D. C.

On the evening of the ninth a meeting was held in Bakersfield under the leadership of Henry M. Seron and Mrs. Ednah Morrison of the Central California Photographers' Club. Again enthusiasm ran high and before the evening was over practically every member at the dinner-meeting had signed for a membership in the P. A. of A.

It was a trip that will be long remembered by those privileged to participate in it because of the delightful friendships and support given us everywhere we went. Now we know more than ever that the 1924 Convention will be held in San Francisco. No one can resist the enthusiastic solidarity and team work of an entire coast such as the Pacific Coast is displaying.

Monthly Meeting of the Photographers' Association of California,

Held in the rooms of the Business and Professional Women's Club, at 575 Market Street, San Francisco, California, on Monday, November 5th, 1923.

After a well cooked and very nicely served dinner, presided over by the new President, Laurence B. Morton, the Chairman asked for the roll-call in the usual form, and said:

Ladies and gentlemen, it gives me a great deal of pleasure to meet you here tonight, my first time here as President. The Board of Directors have had a comparatively easy task, and the preliminary work is all done. Tonight it is going to be our privilege to listen to one of our own members. Not feeling qualified to introduce him myself, I will ask Mr. Ralph Young to introduce Mr. De Gaston.

Mr. Young: Before I introduce Mr. De Gaston, I have a few words I should like to say as spokesman for the membership who are so highly appreciative of what Mr. Morton has done. We present you, Mr. Morton, with this gavel as a small token of our appreciation of your services.

Chairman: I asked Mr. Young to introduce Mr. De Gaston, not myself. But I thank you heartily for this token and will wield it to the best of my ability during the coming year, and hope that, at the end of that time, I may be worthy of it.

Mr. Young: About a year ago our studios were located at 251 Post Street, and, as the portrait photographer who occupied a studio a few stories above us had sold out, we were very curious to meet the new man who was coming in. I have since had the privilege of knowing him a little better, and one of the big things I have found in his makeup is his wonderful sincerity,—he loves his work. Naturally that is one of the reasons why he is producing such beautiful things; and so I feel it is quite an honor to be asked to introduce tonight this man who is struggling for a higher ideal in photography; and I understand he is going to talk to us about these ideals. I introduce with pleasure Paul De Gaston. (applause)

Mr. De Gaston: Mr. President and fellow photographers: When I was asked several days ago to make this talk, I was really glad for the opportunity to speak to you on this subject of pictures. I was pleased for two big reasons. First, it gives me an opportunity to do my bit for the Association in which I am deeply interested and then I have an unselfish desire to help my fellow photographers in any way I can, especially along the line of getting better prices—that is, making better pictures. It is my opinion that good photographs should bring more money and that the public should be educated to give better prices for better pictures. I have felt for years that the photographs for which the photographer got from three to five dollars a dozen some fifteen or eighteen years ago were not worth much, and it is taking time to educate the public to pay for what is better. When you compare the prices people pay for the

things they really want, the pretty things, such as hats and shoes, with the prices they would like to pay for photographs, which they have taken perhaps only once a year, you will agree with me that photographers are very much under-paid for the work that they do. But better photographs mean better prices; and then there should be that something in pictures that commands better prices, and that is what I wish to speak to you about tonight. We do not need any greater variety of papers to produce our pictures, nor plates nor folders about which so many photographers are concerned. But there is an illusive something needed to make pictures real and make them precious, make them worth the money—and it is a mental quality. In nine cases out of ten when a person desires the picture of a friend, a sweetheart, a mother, they do not think of the face. They are just thinking of the person they love, of the personality of the person, the something that makes the person. The kind of pictures that are just pictures of the face are what they make for the "Rogues' Gallery" for identification purposes. That is just a regular, ordinary picture, a record—but YOU are out of it. What you want is that something that shines through the face, the soul, the real and better self—that is what people love and that is what they want when they ask you for your picture.

Did you ever stop to think what a lovely business the photographer's is? The doctor and the lawyer, when people come to them, have to listen to their troubles, all kinds of troubles and sickness. When they come to us, it is with their best expression, their best frame of mind, their best thoughts, their best clothes and their best condition in every way. Back of every photographic order that comes to us is a thought of love. So you see we are in a lovely business. And, to be successful, we must love our business.

I have made a particular study of what it was that made a photograph precious, so precious that you could not place a money value on it. Incidents have taken place that have revealed to me it is "expression" that is the something that makes a picture valuable, precious and worth this something that is beyond money. Without expression a picture is just like sounding brass—valueless. It may have wonderful quality, it may be a wonderful print, but without the spirit of the person in it, without that real something, it is not a picture of any value. It is the story that the picture tells that gives it value. How many times have you portrait photographers had this experience? You have made a set of negatives, one is under-timed or over-timed, something is wrong with one negative, the quality is not there, you have hesitated about sending in a proof of it, and when you did you have hoped they would not order from that one —and then, to your dismay, that was the only one that they liked. And why? Just because it had more real expression in it. It comes down to this, that, while we want negative quality, that quality is not nearly so important as to have expression. I can illustrate it better with child pictures that have pleased the mothers with their real expression upon which you cannot place a money value. I had once an opportunity to try this out. I made some photographs of a little baby three months old and charged a hundred dollars for them. The parents thought this rather high, but consented to have the pictures taken, somewhat reluctantly because of the price. It was my privilege to see them two or three months later, and I asked the mother then how she liked the pictures. "Oh, Mr. De Gaston, they are the finest and cheapest pictures I have ever bought, because there is such a lasting joy to the possession of them!" So, right there, came the thought to really see how much the pictures were worth. "Mrs. Blank," I said, "you paid a hundred dollars for those pictures; have you got them all handy except the one on the wall? Now, you look like a pretty good business woman, Mrs. Blank, who would be willing to make four hundred dollars. I want to take those pictures and give you five hundred dollars in cash right now. I am going to take the pictures from you and tear them up, and, if you consent, pay you the five hundred dollars; I shall also destroy the negatives; you will never see these pictures again, but you will be four hundred dollars to the good."

"No," she said, "I won't do it; I can get hundred dollar bills, lots of them, and they mean nothing to me more than any other, but I can never get pictures like these of my baby again." In this instance these pictures were worth five hundred dollars.

Too often the value that photographers place on their pictures is regulated by the papers used, and they struggle to make different kinds of prints on beautiful mounts, all sorts of things except the real way to make pictures valuable. The real value is in the expression; that is the **Thing** we want to develop more than anything else—that mental something that makes a picture real. I have heard it said of a picture—"This picture fairly speaks and sings to me all the time." It is the expression, that mysterious something, that makes it sing; that is a mental quality.

But expression is not limited to facial expression! it may be in attitude, in position, in physical charm—in effect it is all expression. Then the eyes are the windows of the soul, the something out of which you look at people, the something that is you. That is the something that must be in every picture to be a good photograph.

Now, I think we should try to develop the creative thought. Refrain from copying. Never make a picture different unless you see something different that somebody else has not done. Whenever you have a new idea, develop the new idea, and in that way you will develop the creative thought, and when your work expresses more of the mental and you get that real expression in a picture so that it looks real, you will have the courage to ask better prices; it will come natural and you will feel that you have something valuable, and therefore will have the courage to ask the price. I thank you. (applause)

Chairman: In the absence of other reports I will report on behalf of the Board of Directors, who have met once since their election, and outline in a general way what we are going to do for the coming year to build up our membership, particularly with out-of-town photographers, giving them something more than a meeting for which some come from one to two hundred miles. For that purpose we have outlined a few plans that we are going to try to put into effect. The first is a central Advertising Bureau, which would furnish advertising copy for any locality or any member of the Association who would desire direct mail letters, or anything that a photographer felt in need of in the way of newspaper advertising. The member will only have to call on this Central Bureau to write his copy for him—which would cost money if done by a professional advertising man. We have also arranged with some of our clever photoggraphers who are willing to answer questions. I believe that will be a very good thing, because in two or three different studios I have been asked technical questions; those along my own line I answered, but those along portrait lines I could not answer so well. There will also be a Business Advice Committee that will function in the matter of commercial problems, as well as a Committee on Photographic Help, to whom you can turn in the name of an applicant, and he will be investigated at once. This is a skeleton of the plans which will be submitted for your approval. Then we propose to have a Law Committee to introduce and watch new laws affecting photographers. An organized body, such as this, would have a great deal of influence in Sacramento. We propose to print a certificate of membership, which we can all display in our respective places of business. Last, but not least, is the fact that the membership dues will include a subscription to "Camera Craft" with the dues to all members. I will submit this as the first report of the in-coming Board. If there is no objection we will postpone the appointment of new committees until the January meeting. We will omit the December meeting.

Mr. Lancaster: Mr. Chairman, under new business at the meeting of the Board of Directors it was decided that it would be necessary to raise more money to carry on the projects we had laid out, and the Board passed a resolution that the fees for the coming year would be Ten Dollars, which was passed unanimously. It will be necessary now for you to endorse that action before further operation, and if I

have the right as a member I move, Mr. Chairman, that the action of the Board be approved and the fees fixed for active membership at Ten Dollars for the coming year, which includes "Camera Craft."

It was therefore moved, seconded and resolved: "That the action of the Board in placing the dues at Ten Dollars be ratified."

The Chairman: The discussion on Associate Membership will be held over to the first of the year.

It was then moved, seconded and resolved: "That the retiring President become a member of the Board of Directors ex-officio for the year."

The Chairman: I shall be very glad to have Mr. Webster sit on this Board and have the benefit of his experience. Along the lines of the advertising campaign I want to say that we are very much indebted to Mr. McKie Donnan for the notice sent out calling this meeting. I would like to hear what he thinks about the possibilities of this Centralized Advertising Bureau for the next year.

Mr. McKie Donnan made a very interesting and entertaining talk, illustrating in his own quaint way many of the points that had been brought out by Mr. De Gaston.

Mr. Lothers, referring to the great interest that Mr. Blumann has taken in the Association, and also to the fact that he would probably join the Flying Squadron on its visit to Los Angeles, proposed that the Association show its appreciation of his interest in its work by making him an honorary member.

The motion was duly seconded and carried unanimously.

Association News

Published under the authority of the Board of the P. A. of A. under arrangement with the publishers of Abel's Photographic Weekly, Bulletin of Photography and CAMERA CRAFT.

S. R. CAMPBELL, Jr., General Secretary, 722 Bond Bldg., Washington, D.C.

Another Star in the P. A. of A. Flag

The Photographers' Association of California having made formal application to the P. A. of A. for a charter and same having been approved by the Board of Officers, we are pleased to publish the following announcement:—

"Photographers' Association of California,
I. M. Reed, Acting Secretary,
Claus Spreckels Building,
San Francisco, Cal.

"Dear Miss Reed,

"Your letter with the application of your Association for a Charter from the Photographers' Association of America was duly received.

"I have submitted this to our Executive Board and am pleased to inform you that they have granted your request.

"While it may be well to wait until some convenient date for the formal presentation of this charter, it will be delivered to you in due time and in the meantime, please consider that you are working under charter and that we wish to assist and co-operate with you in every possible way.

"We hope to be of a great deal of service this coming year both to our individual members and to the associations that are working with us in a common cause. Photographers are awakening to the value of organized effort and there is a big field of usefulness for associations such as yours and ours.

"With very best wishes, I am,

Sincerely yours,

(Sig.) "Clarence Stearns, Pres.,
"P. A. of A."

To the P. A. of California

A word of welcome and greeting from the Headquarters, P. A. of A.

It is with pleasure that the above copy was received at this office and duly entered to record. The step just taken is but one more bond between the East and the West, such as has been taken by many other associations with beneficial results and it is hoped, will materially aid the P. A. of California to build up a stronger organization, thereby adding strength to the National.

You have a wonderful State, brim full of natural resources, both material and scenic and an exceedingly loyal and energetic population of which the Photographers are an important part (judging by the Delegation sent to the National Convention). May we tender you our heartiest support and co-operation in promoting the ideals of the Profession?

December,—and another year is fast slipping by. One that for some, has been filled with trials and tribulations, while for others, is memorable as a year full of happy recollections, of the realization of plans well laid, the harvest of earnest effort.

But why spend time on retrospection except as a basis for improving the future. The Past is history and cannot be changed; the Future is open to all, to make it what we will, to continue in the same old rut or have a thorough rejuvination of Shop and principles with which to face the world on January first and perpetuate through the following three hundred and sixty-five days of 1924. We are all more or less prone to making New Years Resolutions—which is a commendable attribute—but goes for naught unless carried out day by day and month by month. Probably the hardest resolution to maintain is that of a cheerful disposition as expressed by the familiar rhyme—

"It's easy enough to be pleasant,
When life goes along like a song—
But the man worth while
Is the man with a smile
When everything goes dead wrong."

How many of us will be able to live this sentiment in 1924?

The P. A. of A. prospects for 1924 cannot help but look bright. Quite a number of membership applications have been received and our annual drive not yet launched. In some ways, December is a logical time of the year for members, new or old, to pay their dues and thereby derive twelve months service from their credentials. The brass plate informs the Public of another year's resolve to conform to Sound business principles,—The Code of Ethics. The cut of the Association Emblem is available for the new stationery, cards, calendars, etc. The window transparency may be revived by a fresh one and the whole atmosphere of the Studio enthused with a new view of Life.

Winona School, the greatest achievement that the P. A. of A. has ever given the Profession, is showing signs of eclipsing its former enviable record. Numerous inquiries and a number of registrations at this early date can be attributed to the world wide reputation established. Our record traveler from Seattle, Washington, in 1923, bids fair to lose her laurels in 1924 should the plans of Mr. Rustom of Bombay, India, materialize. He is contemplating a visit to America and having read of Winona School in Camera Craft, thinks this is a good opportunity to pursue his special study of the Art.

TO ALL—A MERRY CHRISTMAS AND A HAPPY NEW YEAR.

From "Service"

The best efforts given to an employer are those for which the employee is not paid, those which arise from enthusiasm in the job.—Service.

The Amateur and His Troubles

Conducted by P. Douglas Anderson

Artificial Light

In our editorial, reference is made to making pictures by artificial light and it is my purpose to try and suggest to my readers a few of the different methods that might be used when making pictures at night.

Subjects and Exposure

When making studies of inanimate subjects a long exposure is not a drawback, as there is no danger of the subject moving, therefore, any type of artificial light can be used. If the subject should happen to be a child with lots of life the light source will have to be strong enough to allow a short exposure, or else there will be danger of the child moving. Should the subject be an adult, a light strong enough to give a fully exposed negative with a short time exposure will be found satisfactory.

Lighting Apparatus

There are various types of lighting apparatus that can be used. The flash-light method is the most commonly used of all. Although many amateurs measure out the powder necessary and use a flash-light gun to ignite it, to the beginner at least the flash-light cartridges will be the simpliest and easiest to use. There are two types of cartridges, the regular and the spreader flash cartridge.

For the ordinary subject the regular will be found satisfactory and for other subjects where a broad lighting effect is necessary the spreader will be the best.

Magnesium ribbon at one time was used a great deal for lighting effects and some very beautiful results were obtained by this method. However, the Eastman Flash Sheet will probably be found much simpler to use. The flash sheet can be attached to a stick and ignited that way, but undoubtedly the flash sheet holder made for the purpose will be found more satisfactory.

Electric light is now installed in nearly all the modern homes and it is a very satisfactory system of lighting. There are different ways the amateur can use it. The electric bulb can be used in a reflector, with a piece of blue tracing cloth hung in front of the light to form a diffuser. Another method is to use a battery of lamps. If this is done, care will have to be exercised that the circuit will carry the load, here the aid of an electrician will be necessary. There are also several very satisfactory makes of portable electric lighting apparatus manufactured.

Flashlight Portraiture

When making portraits with the aid of flashlight we are not restricted to location as we would be if daylight were used. The subject can be posed just where we want and the lighting arrangements made accordingly. A mistake many amateurs make when using flashlight is to turn low or extinguish all the lights in the room. This is bad, as the portrait will show a staring, unnatural effect in the eyes. It is best to leave all the lights burning. If this is done, the subject will feel natural and the defects will be eliminated. There is no danger of the lights effecting the sensitive plate or film as they are usually too weak to register during the short time the shutter is open. The flashlight can be placed at the angle necessary to give the lighting effect wanted. This can be determined by using a portable lamp to get just the effect wanted and then placing the flash at the point selected

Natural Posing

A natural pose should always be aimed at. Give some children their toys to play with and that is all that is necessary. With other children various plans will

"OH, SEE WHAT SANTA BROUGHT ME!"

By O. C. HANSON

have to be resorted to. Our illustration by O. C. Hanson, San Francisco, demonstrates one method that proved very satisfactory. While the little girl was asleep in bed, the tree was decorated and the toys arranged. The 5 x 7 Eastman View Camera No. 2 was set up in the corner of the room and focused on the tree. The Goerz Dagor Lens 8¼-inch was stopped down to F:16. One half teaspoonful of Victor Flash powder extra fast was measured out and placed in the flash gun and everything was ready for the little subject. The little girl was wakened up, she got out of bed and walked through the open door to where the tree was. The tea set attracted her attention; as she reached for the tea pot she exclaimed: "Oh, see what Santa brought me!" The exposure was made right then. The Seed plate, number thirty, was developed in pyro soda. The reproduction was made from a print on Azo F.

Other Subjects

Portraits and genre pictures are only two of many subjects that can be made by artificial light. Flower studies lend themselves very nicely to this way of working. Still life studies can be satisfactorily made this way. Many other subjects will suggest themselves. Just get started and everything will take care of itself.—P.D.A.

International Photographic Association

Officers of the I. P. A.

F. B. Hinman, President, Evergreen, Jefferson County, Colo.

Louis R. Murray, Chief Album Director, 927 Ford St., Ogdensburg, N. Y.

A. E. Davies, General Secretary, 1327 Grove St. Berkeley, Calif.

John Bieseman, Director Post Card Albums, Hemlock, Ohio.

Lovic Meredith, Director Stereoscopic Division, Rupperttown, Tenn.

A. E. Davies, Director Lantern Slide Division, 1327 Grove St., Berkeley, Calif.

NEW MEMBERS

5292—Lew J. Tyrrell, Eugene, Oregon.
5x7, 3¼x4 and any size enlargement, of landscape, marine, travel, art objects, soft focus studies; for travel and historical especially, anything interesting; Lantern slides. Class 1.

5293—Pedro Mario Leguizamo, Cacuba No. 40, Mexico City, Mexico.
Class 3

5294—M. W. Sneed, U. S. S. Antares, care of Postmaster, New York, N. Y.
4x5 to 8x10 (principally 4x5 and postals) of mainly marines; for anything of general interest. Class 1.

5295—C. W. Baker, Box 12, Waynesburg, Ohio.
Class 2.

5296—Fred M. Vigles, 563 4th St., Portland, Ore.
3¼x5½ of mountain scenery, beach scenes, buildings, marine; for the same and anything of general interest. Class 1.

5297—J. F. Carter, Elizabeth, La.
5x7 of Photomicrographic of many subjects, clouds, landscapes, flowers, machinery, insects; prefer nudes and draped female figure. Class 1.

RENEWALS

4413—Wilfred Hickman, Fairmount, Ill.
4x5 and smaller of snow scenes, landscapes, wild and cultivated flowers; for similar subjects on anything of interest. Class 1.

4618—J. E. Dow, Big Sandy, Texas.
Post cards of odds and unusual subjects; for the same and nudes. Class 1.

4891—Hugo Koehn, P. O. Box 609, Houston, Texas.
3¼x5½ of scenic and nudes; for the same. Class 1.

5029—W. L. Haemer, 349 St. Johns Place, Brooklyn, N. Y.
9x12 cm. to 6½x8½ of figure studies, still life, landscapes and marines; for the same. Class 1.

5040—William H. Walton, 139 E 9th Ave., Homestead, Pa.
2⅞x4⅞ glossy, views from coast to coast; for anything of general interest. Class 1.

5119—Edward McKenzie, 159 E 34th St., New York, N. Y.
3x4 landscapes and New York City views made with Little Ars soft focus lens; for other soft focus work. Also 4x6 Verito portraits. I am especially interested in soft focus portraits at present. Class 1.

5214—John R. Lindmark, P. O. Box 494, Poughkeepsie, N. Y.
Will exchange stereo views 4.5 x 10.7 cm. size only. Class 1.

CHANGE OF ADDRESS

2739—A. Ray Welker, 406 No. Harvey Ave., Oak Park Ill. (Was Chicago, Ill.)

3676—C. R. Lowe, 214 W. 9th St., Beatrice, Neb. (Was Hebron, Nebraska.)

4314—Watson E. Bowman, Box 70, Sheridan, Wyo. (Was Dayton, Wyo.)

4712—John W. G. Winkler, care of 90th Hdg. Airo Att. Squadron, Kelly Field, Texas. (Was Fort Logan, Colo.)

5199—E. E. Sheppard, Box 2010, Miami, Fla. (Was 33 Real Estate Bldg., Miami, Fla.)

5256—C. L. Chafee, 2059 Floral Ave., Columbus, Ohio. (Was 114 Wilson Ave., Columbus, Ohio.)

A Photographic Digest

Edited by H. D'Arcy Power, M. D.

Positives by Reversal

There are subjects that never die out of the photographic press for the simple reason that their ends are desirable, however long their attainment may be postponed. Such is the elimination of the negative in the making of a picture. I had my own go at it in my paper on making "Lantern slides direct" C. C., February, 1911, with very great success as far as quality was concerned, but seemingly too much trouble to obtain popularity. The success of the autochrome plate shows that it can be done both successfully and simply. And why? Because the sensitive film is both fine grained and very thin, and even. If the Lumiere Company were to put a simple lantern plate, with such an emulsion film, on the market they would confer a boon on many workers, and end with satisfactory sales. A new element in the problem seems to have been discovered by Mr. J. G. Capstaff of the Kodak Company, who finds success dependent on the recognition of the exact density of the silver deposit and a technique adapted thereto. As his method (see patent 1678357, page 419 Brit. Journ. Phot. July 6, 1923.) has been put to commercial use in the making of motion picture films we may rest assured that it has more than theoretical interest.

The Gold Toning of Sepia Prints

When a sulphuretted silver image is placed in a sulphocyanide gold bath, it passes thru a series of color changes to pure red chalk, producing the most indestructible photographic image that I know of. Other gold baths do not give this result. Why? A. and L. Lumiere and A. Seyewitz communicated to the Faraday society a paper on this problem showing that the image consists of a double sulphide of silver and gold, plus a certain amount of uncombined sulphur. And to obtain this the bath must contain a soluble sulphur compound such as the ammonium sulphocyanide or thisourea. In the final image the gold stands as 133 to 100 of silver, hence the permanency of these prints. H. D'A. P.

The Distance Difference—A Curious Focal Rule

The total distance between negative and bromide paper, or original and copy, when enlarging or reducing, is often referred to as the image-object distance, or D. The difference between two such total distances, obtained with two different ratios of enlargement or reduction, using the same lens, may, therefore, conveniently be called the distance difference, or D2—D1.

Now, there is a curious rule, beautiful in its symmetry and exactness, respecting the relation between focal length and the distance difference, which, as far as the writer is aware, has not previously been stated in so simple a form.

It is best explained by a few examples. Suppose one is enlarging to a ratio of 2 diameters with a lens of 6 ins. focus, the total distance from the negative to bromide paper will be 27 ins. If the enlargement is of 3 diameters the total distance will be 32 ins. It will be observed that the distance difference is 5 ins. The nodal space, if any, need not be considered, because it is equally present in both distances, and, therefore, cancels out. Now, the interesting fact to be noted is that this distance difference, 5 ins., is 5/6 of the focal length used, and it will be found that the same fraction holds good, whatever the focus, provided the two enlargements are respectively in the ratios of 2 and 3.

Since 5 ins. is the distance difference with a focal length of 6 ins., the difference for a focal length of 1 in. will be 5/6, or 10/12 in. If, therefore, we make a card-

board scale of 10/12 in. to the inch, with ten subdivisions in each space to represent tenths, it can be employed to ascertain the focal length of any lens, by simply using it to measure the distance difference for two enlargements or reductions in the ratios of 2 and 3. Thus, 10/12 in., marked 1 on the scale, will be the distance difference for a 1-in. focus lens; 20/12, marked 2 on the scale, will be the difference for one of 2-ins. focus; 30/12 for 3-ins. focus and so on.

To put this into formula, with ratios of 2 and 3, the distance difference will be equal to the focus minus one-sixth of the focus.

But the same principle is found to apply with all ratios, which only differ by one diameter. Therefore, the formula may be generalized thus: With two ratios differing by one diameter, the distance difference will equal the focus minus $\frac{I}{R1 \times R}$ of the focus.

To take an actual example, suppose with a ratio of 4 the image-object distance is 44, while with a ratio of 5 it is 50.65. Then, $4 \times 5 = 20$, therefore, the distance difference, 6.65, is 19/20 of the focus. Dividing 6.65 by 19, we obtain 0.35, and adding this to 6.65, the result is 7 ins., the exact focal length. On comparing these two image-object distances with those in a table for enlarging and reducing, it will be seen that they are each ¼-inch in excess of the theoretical distances, so that the lens must obviously have a nodal space of plus ¼-inch.

It may further be pointed out that when there is a difference of more than one diameter in the ratios, it will simply result in adding one focal length to the distance difference for each extra diameter, and increasing the numerator of the fraction subtracted in proportion. Suppose, with a ratio of 5, the image-object distance is found to be 57.6 inches, while with a ratio of 8 it is 81 inches, the distance difference being 23.4 inches. Then 23.4 inches will equal 3 times the focus minus 3/40 of the focus. Therefore, divide 23.4 by 39, obtaining 0.6 as the quotient; when $23.4 + 0.6 = 24$, and $24 \div 3 = 8$ inches, which is the focal length.

These relations are simple and easily memorized, and will often prove of service in facilitating the adjustment of enlarging and reducing apparatus to obtain an exact scale of image, or alternatively in ascertaining an unknown focal length, finding the best focus for work in a given space, or deducing measurements from photographs.

Let us take a typical instance. A copying camera having a stationary back and a 5-inch focus length is focussed for a one-third reduction. How much further away must the easel be moved for a one-fifth reduction? This is a 2-diameter difference of ratio, and $3 \times 5 = 15$. Therefore, the distance difference, or amount by which the easel should be moved, will be twice the focus minus 2/15 of the focus, $= 10 - \frac{2}{3} = 9\frac{1}{3}$ inches. Then, as the camera back is stationary, it is only necessary to focus the original with the full aperture of the lens to obtain a reduction to the exact scale required.—A. Lockett., B. J. of P.

Photoengraver

Applications will be rated as received until December 28th. The examination is to fill vacancies in the Government Printing Office, at an entrance salary of $1 an hour, plus the increase of $20 a month granted by Congress, and vacancies in positions requiring similar qualifications.

A separate register will be maintained for each of the following: Half-tone and line photographer, stripper and printer, copper etcher, zinc etcher, finisher, router and blocker, and prover.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience on a scale of 100. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil-service examiners at the post office or custom-house in any city.

Notes and Comment

Reported By Wm. Wolff

Like Carters, the Eastman Kodak Company have an early riser in Walter Myers, who travels the Northwest for them. He's up at 6 a. m. every morning and has at least two orders written up before 8 a. m. (Some left over from the day before.)

Lyle Brown and Walter Myers, both Eastman Kodak men, took on the writer for a pool match on his last trip to Portland. The writer showed them both up as poor players.

Mr. Collins, formerly of Hartsook Studio, is now with the Bushnell Studio, Portland, Ore.

Harry Lovick is now in the Northwest.

Mr. G. C. Turpin (no relations to the famous Ben) is head of the Kodak and Pen department of Bartell's in Seattle.

All you California photographers don't forget you must join the National Photographers' Association this month in order to get the Convention in San Francisco in 1924. Do it now.

H. Sackrider and wife were in San Francisco the first Monday in November and attended the Association Dinner.

De Gaston proved himself a speaker as well as photographer at the last Association Meeting.

George Barrows Here

One of the pleasures of being in CAMERA CRAFT'S office is to meet the visitors. The greatest pleasure we have had recently is a visit from the genial George L. Barrows of the Agfa Products, Inc., New York. He is a San Franciscan and everybody boosts him. When you say "Do you know Mr. Barrows?" The reply is "George Barrows? Why of course, he is a fine fellow." He is making a trip to establish wider distribution of the Agfa products and says business is coming along fine. He knows a lot more than Agfa but can't be induced to talking any thing else. But for his breeziness and the cheer he brings, long may George live and make visits!

The Passing of J. E. O'Neil

It is our sad duty to record the death of Mr. J. E. O'Neil on Friday, November 2nd, 1923, after a short illness of two weeks.

He was the representative of the Central Dry Plate Company here in San Francisco for the past twelve years.

Though of a quiet, unassuming nature he was always ready to do his part in helping others along in the photographic profession.

Mr. Griesedick, the president's son, will carry on Mr. O'Neil's work here.—P.D.A.

Spreading Out

The formal fall opening of the newly remodelled Morrison's Studio, Visalia, California, took place on Wednesday, November 7th, 1923. Congratulations!

Local Photographers to Boost City at Empire Exhibition

The Vancouver and New Westminster Photographers' Association held their final meeting of the year at the Wadds Studio, 736 Granville St., a record crowd being in attendance.

The Charter of Affiliation with the Pacific Northwest Association was formally presented by their Vice-President, Mr. Vanderpant.

Owing to the high rating many B. C. Photographers have received at recent conventions, it was decided to send an Association display of Professional work to the Empire Exhibition in London if space were available. The Secretary, Mr. Bullen, was asked to cable the Authorities for all particulars.